
ARNOLD & PORTER LLP

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399 Park Avenue
New York, NY 10022-4690

February 9, 2007

VIA E-MAIL AND FEDEX

Ms. Kim Muratore (SFD-7-5)
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: San Fernando Valley / North Hollywood, California
11600 Sherman Way

Dear Ms. Muratore:

This is a letter response to the United States Environmental Protection Agency's ("EPA") November 22, 2006, supplemental request for information pursuant to Section 104(e) of CERCLA (the "November 2006 supplemental Section 104(e) Request"), sent to Honeywell International Inc. ("Honeywell"), concerning the site on Sherman Way in the North Hollywood Operable Unit at which Honeywell's predecessor in interest conducted manufacturing operations (the "Facility"). Your supplemental request follows up on Honeywell responses dated June 5, 2006, and May 22, 2006, to your previous request for information of March 28, 2006.

As with Honeywell's May 22, 2006, and June 25, 2006, responses, before providing responses to the specific requests, it is important to note a few preliminary matters. Over approximately the past two decades, Honeywell and its predecessors have provided voluminous information regarding the Facility (which ceased operations approximately 15 years ago) to EPA. This information has included responses to several prior Section 104(e) requests, including letter requests dated August 19, 1987 (with responses dated October 15, 1987, and June 20, 1988), May 17, 1988, April 17, 1991 (with a response dated June 27, 1991), May 22, 1992 (with a response dated July 21, 1992, and a supplemental response dated September 17, 1992), and April 18, 1995 (with a response dated July 20, 1995). EPA also has been provided information in the form of responses to discovery requests in connection with lawsuits concerning the Facility, including thorough responses to written interrogatories propounded in the action captioned *U.S. v. AlliedSignal, Inc.*, et al. (Case No. 93-6490; U.S. District Court, Central District of California). Honeywell has provided further information regarding the

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Facility in other forms as well, such as through presentations to EPA, responses to other letter requests for information from regulatory agencies, and regular groundwater monitoring reports. In light of Honeywell's history of providing substantial information and data regarding the Facility, it is Honeywell's understanding that most of the available information sought by the November 2006 supplemental Section 104(e) Request has previously been provided to EPA.

Honeywell has made a good faith effort to locate and to provide available information responsive to EPA's requests. Honeywell continues to be happy to respond to further information requests by EPA and is willing to work with EPA to find answers to specific inquiries. Honeywell reserves the right to supplement the responses below as the review process continues.

Moreover, Honeywell makes the following objections to and additional general points with respect to the November 2006 supplemental Section 104(e) Request:

A. Honeywell generally objects to the November 2006 supplemental Section 104(e) Request to the extent that it seeks information or documents protected from discovery by the attorney-client privilege, the attorney work product doctrine, the joint defense or common interest privilege, the self-evaluative privilege, or any other applicable privilege or doctrine. Nothing contained in these objections or the responses below is intended as, or shall in any way be deemed as, a waiver of privilege. Honeywell further objects to the November 2006 supplemental Section 104(e) Request to the extent that it seeks confidential or proprietary business information in Honeywell's possession or confidential settlement information.

B. Honeywell generally objects to the November 2006 supplemental Section 104(e) Request to the extent that it seeks information or documents not in the possession, custody, or control of Honeywell.

C. Honeywell generally objects to the November 2006 supplemental Section 104(e) Request to the extent that it is overbroad, unduly burdensome, not reasonably calculated to lead to the discovery of admissible evidence or information necessary or useful to EPA's investigation, or beyond the authority provided in CERCLA Section 104(e).

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D. Honeywell generally objects to the November 2006 supplemental Section 104(e) Request to the extent that it seeks information that may be derived or ascertained from documents already within the knowledge, possession or control of EPA.

E. As noted above, this response reflects a diligent search of Honeywell's records, but no representation is made that all such records have been located and searched. Honeywell reserves the right to supplement this response in the event that it locates additional responsive non-privileged documents or information, but does not assume the obligation to do so.

F. In certain instances below, where documents contain the information sought by the November 2006 supplemental Section 104(e) Request, Honeywell has directed EPA to attached documents rather than providing answers in a narrative form.

G. Honeywell reiterates its request for confidential treatment for all nonpublic documents (designated as "confidential" on the documents) provided in earlier responses to the Section 104(e) Requests and which may be referenced in the responses below. The period of time for which confidential treatment is desired is indefinite. To the best of our understanding, Honeywell has not disclosed the information for which confidential treatment is requested, except to agents and employees and others under obligation to keep such information confidential, and has guarded the confidentiality of this information by retaining it within secure storage facilities. The reason for this request is that the information may contain trade secrets or other proprietary information and may be protected under confidentiality agreements with other entities. Honeywell asserts that disclosure of its confidential information may result in substantial harmful effects on its competitive position.

H. Unless otherwise indicated, when providing information regarding the Facility, Honeywell is providing information concerning the period that Honeywell's predecessors in interest conducted operations at the location. Except as noted with respect to ongoing environmental analysis that Honeywell is conducting, Honeywell does not have direct knowledge of operations at the "Facility" conducted by subsequent owners, such as Kaiser Permanente, Public Storage, and Home Depot.

Notwithstanding the foregoing background and objections, and preserving and without waiving the objections, Honeywell responds to the November 2006 supplemental Section 104(e) Request, incorporating each of the above objections, as follows. The number for each request repeated below corresponds to the number of the request as it

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appears in the Section 104(e) Request. EPA's follow up or supplemental questions are copied below the numbered questions.

2. Information obtained by EPA indicates that the Company owned the real property at 11510 Sherman Way, North Hollywood, California ("11510 Sherman"), 11600 Sherman Way, North Hollywood, California ("11600 Sherman"), and possibly 11500 Sherman Way, North Hollywood, California ("11500 Sherman"). 11500 Sherman, 11510 Sherman, 11600 Sherman, and any other real property (along with improvements thereto) that the Company owned that was a part of or comprised the Allied-Signal facility/Avibank Manufacturing facility on Sherman Way is hereinafter referred to as the "Facility." Provide the following information with respect to the Company's ownership of the Facility:

- a. The dates the Company owned the Facility;**
- b. The parcel number(s) and corresponding street address(es) for the Facility;**
- c. A copy of each document evidencing the purchase, ownership, and sale of the Facility;**
- d. The current or last known address and phone number of all other current and previous owners of the Facility;**
- e. A copy of each lease, rental agreement, or any other document between the Company and any business that operated at the Facility for all periods of time that the Company owned the Facility;**
- f. The name, address, and phone number contact for each tenant or lessee; and**
- g. Each type of business, commercial, or industrial operation conducted at the Facility, and the name of each operator and the dates that each was operating.**

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Follow up Request: Information supplied to EPA as part of the current information gathering process indicates that the property currently referred to as 11500 Sherman Way, and at which Avibank Mfg., Inc. currently operates was not part of the facility at which the Company formerly operated. State whether this is, in fact, an accurate statement regarding historical property boundaries.

After receiving the EPA's follow up request on this issue, Honeywell conducted an additional good faith search of its Real Estate Department files, and that search revealed no information regarding the property currently referred to as 11500 Sherman Way. The results of that search indicate that the 11500 Sherman Way property was never part of the Facility, although Honeywell cannot definitively confirm that it was not.

Follow up Request: In its 104(e) response, the Company provides only limited information regarding the portions of the former Allied Signal facility at which Home Depot USA, Inc. and Public Storage, Inc. currently operate, and did not provide the requested information with respect to the western portion of the former Allied Signal facility. Respond to request 2(a) by providing the actual dates that the Company owned the entire Facility. If the Facility consisted of multiple parcels purchased and sold at different times, provide the dates of ownership for each parcel.

Honeywell's predecessor Bendix Aviation Ltd. purchased the property comprising the Facility on June 11, 1941, from Lankershim Ranch Land & Water Company.

Other than the documents that already have been provided, Honeywell has been unable to locate additional documents related to the 1970 sale of the western portion of the Facility to Kaiser Permanente. Accordingly, Honeywell cannot provide EPA with additional information regarding that sale.

Honeywell sold the eastern parcel to Home Depot on or about March 14, 1995 and the western parcel to Public Storage on or about December 23, 1997. Copies of the Home Depot and Public Storage sales agreements were provided to EPA with Honeywell's June 5, 2006, response.

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Follow up Request: **Provide complete responses to requests 2(b), 2(c), 2(e), 2(f) and 2(g) with respect to all parcels of property which comprised the Facility. Specifically include in the Company's response information about the western portion of the Facility at which Kaiser Permanente currently operates.**

Honeywell objects to this request to the extent it asks for information about the property comprising the Facility during times when the property was not owned by Honeywell and was outside Honeywell's control.

2(b). Honeywell believes that the current street address of the Kaiser Permanente property is 11666 and 11668 Sherman Way, North Hollywood, California 91605. Honeywell believes that the address of the Home Depot property is 11600 Sherman Way, North Hollywood, California 91605. Honeywell believes that the address of the Public Storage Property is 11620 Sherman Way, North Hollywood, California 91605.

A portion of the assessor's map showing the area of the Facility is attached as Exhibit A. Further parcel information can be obtained from the Los Angeles County Office of the Assessor at <http://www.assessor.lacounty.gov/>.

2(c). Honeywell has previously provided EPA with copies of the purchase and sale agreements for the Home Depot and Public Storage portions of the Facility. Attached to this response as Exhibit B is a copy of a grant deed from Honeywell to North Hollywood Acquisition, L.L.C. for the Public Storage portion of the property. Honeywell has been unable to locate copies of other deeds for the Facility in its files.

2(e),(f). Honeywell has no information indicating that its predecessors ever leased any portion of the property comprising the Facility.

2(g). It is Honeywell's understanding that, before the acquisition of the property by Honeywell's predecessor, the land was used for agricultural purposes. Some documents indicate that a portion of the property may have been used to store bricks. Honeywell does not have any more specific information on previous uses.

Honeywell's operations at the facility are well known to EPA and are the subject of numerous reports submitted to the Agency, including reports identified on Exhibit C.

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The only operations at the Sherman Way property since Honeywell's sale of that property are the operations conducted by Kaiser Permanente, Home Depot, and Public Storage or their tenants. Honeywell is not in a position to characterize the type of operation conducted at the Sherman Way property after Honeywell sold the property and it was no longer under Honeywell's control. For further information on operations at the Facility subsequent to Honeywell's ownership, Honeywell directs EPA to the current owners of the property comprising the Facility, contact information for which was provided in Honeywell's June 5, 2006 response.

4. Identify the individuals who are or were responsible for environmental matters at the Facility. For each individual responsible for environmental matters, provide his/her full name, current or last known address, current or last known telephone number, position titles, and the dates each individual held such position.

Follow up Request: In its 104(e) response dated June 5, 2006, the company provided the name and contact information of FOIA ex 6 Personal Privacy, and referenced a prior response which identified FOIA ex 6 Personal Privacy, and FOIA ex 6 Personal Privacy, in response to this request. Provide the dates that these individuals held their positions. Provide updated contact information for FOIA ex 6 Personal Privacy and FOIA ex 6 Personal Privacy.

Honeywell has been unable to ascertain the exact dates that FOIA ex 6 Personal Privacy and FOIA ex 6 Personal Privacy held their positions. It appears that FOIA ex 6 Personal Privacy held his position into the mid- to late-1980s, and he is now retired from Honeywell. His current contact information is:

FOIA ex 6 Personal Privacy

Honeywell has no additional information on FOIA ex 6 Personal Privacy. In a follow-up interview with FOIA ex 6 Personal Privacy, FOIA ex 6 Personal Privacy identified two additional persons who may have knowledge relevant to this request. FOIA ex 6 Personal Privacy for Honeywell's Torrance, California facility, oversaw environmental work at the Facility from the early 1990s through her departure from the Torrance facility in late 1995. FOIA ex 6 Personal Privacy was the North Hollywood Site Manager from the early 1990s through his

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transfer to another Honeywell unit in June 1995. Current contact information for [redacted] and [redacted] is: [redacted] FOIA ex 6 Personal Privacy

FOIA ex 6 Personal Privacy

FOIA ex 6 Personal Privacy

16. Identify any individual or entity that owned or operated the Facility prior or subsequent to the Company. For each prior or subsequent owner or operator, further identify:

- a. The dates of ownership/operation;
- b. The nature of prior or subsequent operations at the Facility;
- c. All evidence showing that the prior or subsequent owner or operator controlled access to the property; and
- d. All evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at the Facility during the period of prior or subsequent ownership or operation.

Follow up Request: **Provide a response to requests 16(b), 16(c) and 16(d).**

Please see response to request number 2, above. Honeywell objects to this request to the extent it asks for information about the property comprising the Facility during times when the property was not owned by Honeywell and was outside Honeywell's control. Honeywell has only anecdotal information that before Honeywell's predecessor's ownership the property at which the Facility is located was used for agricultural purposes. Some documents indicate that a portion of the Facility may have been used as a storage area for bricks. Honeywell has no other information on the use of the property before Honeywell's predecessors' ownership.

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Honeywell does not have direct information regarding, and does not undertake to characterize, the operations at the Facility subsequent to Honeywell's ownership, nor does Honeywell have any information as to whether or to what extent prior or subsequent owners controlled access to the Facility. Honeywell has no information that any hazardous substance was released at the Facility before or after Honeywell's ownership, and Honeywell is unaware of any such release or any threatened release. For further information on operations at the Facility subsequent to Honeywell's ownership, Honeywell directs EPA to the current owners of the property comprising the Facility, contact information for which was provided in Honeywell's June 5, 2006 response.

23. Provide copies of all environmental data or technical or analytical information regarding soil, water, and air conditions at or adjacent to the Facility, including, but not limited to, environmental data or technical or analytical information related to soil contamination, soil sampling, soil gas sampling, geology, water (ground and surface), hydrogeology, groundwater sampling, and air quality.

Follow up Request: **Provide a list which identifies by document title, date and author all documents previously submitted by the Company in response to this and similar requests, along with the date of the 104(e) response with which it was submitted.**

In addition please provide a copy of the Soil Gas Monitoring Summary report prepared by Hydrologue, Inc., dated March 3, 1995, for the Allied Signal property in North Hollywood, California.

Attached to this letter as Exhibit C is an list of documents that contain information responsive to this request. Exhibit C identifies documents by title, author, and date to the extent that information is available. In light of the manner in which documents were previously provided and the manner in which Honeywell's files are maintained, we have been unable to provide the dates on which these documents were previously provided to EPA.

The index provided in Exhibit C is not an exhaustive list of documents in Honeywell's possession that may be relevant to the North Hollywood facility or the San Fernando Valley Superfund Site. In an effort to provide information most useful to the agency, Honeywell has only included those documents that Honeywell believes are most likely to contain information responsive to this request. Honeywell has also endeavored

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to exclude from this index documents that are specific to sites other than the North Hollywood facility and documents authored by EPA or its consultants.

Upon request, Honeywell will provide EPA with copies of documents identified on Exhibit C, to the extent a document is in Honeywell's files and is not subject to any applicable privilege. Exhibit C has been prepared from multiple sources and the appearance of a document on the list does not guarantee that the document continues to be in Honeywell's possession. Moreover, Honeywell reserves the right to designate all or portions of any document on Exhibit C as confidential business information prior to providing the document to EPA.

A copy of the Soil Gas Monitoring Summary Report prepared by Hydrologue, Inc. dated March 3, 1995, is enclosed with this response.

25. Identify all insurance policies held by the company from the time it commenced ownership of or operations at the Facility until the present. Provide the name and address of each insurer, the policy number, the amount of coverage and policy limits, the type of policy, and the expiration date of each policy. Include all comprehensive general liability policies and "first party" property insurance policies and all environmental impairment insurance. Provide a complete copy of each policy.

Provide a list of all such insurance policies which includes the information requested above.

Honeywell currently maintains no insurance policies that would provide coverage for the Facility. In the 1980s, Honeywell (then Allied-Signal Inc.) commenced litigation against its insurers with respect to coverage for environmental conditions at properties owned by Allied-Signal Inc., including the Facility. That litigation settled in 1990. Under the terms of that settlement, Honeywell's predecessor received a lump sum payment from its insurers in exchange for a release by Honeywell from all claims related to property conditions at the sites at issue. All insurance policies of which Honeywell is aware that may have provided coverage with respect to the Facility were covered by the terms of the settlement. Consequently, Honeywell is not aware of any insurance coverage applicable to the Facility.

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26. Provide copies of any applications for permits or permits received under any local, state, or federal environmental laws and regulations, including any waste discharge permits, such as national pollutant discharge elimination system permits.

Follow up Request: **In its June 5, 2006 response, the Company states that it does not maintain the requested information in a format that would permit it easily to be located, gathered, synthesized, and provided to EPA in the limited time permitted. Provide a list of all such permits which were in effect at the Facility during the period of the Company's operations which includes the type of permit, effective dates of the permit, and the issuing authority.**

As Honeywell stated in its June 5, 2006 response, operations at the Facility spanned the period 1940 to 1992. Honeywell does not maintain the requested information for the period when the Facility was in operation in a format that would permit it to be located, gathered, synthesized and provided to EPA. Specifically, Honeywell does not have in its possession a list of permits held by the Facility during its operational period or documents from which such a list could readily be compiled.

27. If the Company discharged any of its waste stream to the sewer at the Facility, provide copies of all permits and all analyses performed on discharged water, and identify all locations where waste streams were discharged.

Follow up Request: **Provide a list of all such discharge permits which includes the information requested above.**

Please see Honeywell's response to Request number 26, above. Operations at the Facility spanned the period 1940 to 1992, and Honeywell does not maintain the requested information for the period when the Facility was in operation in a format that would permit it to be located, gathered, synthesized, and provided to EPA. Specifically, Honeywell does not have in its possession a list of sewage discharge permits held by the Facility during its operational period or documents from which such a list could readily be compiled. Honeywell is aware that a national pollutant discharge elimination system permit was issued with respect to the Facility, which expired in 1995. Honeywell believes that EPA previously has been provided with a copy of this permit, but if EPA cannot locate it, Honeywell will provide an additional copy.

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32. Please identify all leaks, spills, or other releases into the environment of any hazardous substances or pollutants or contaminants that have occurred at or from the Facility. In addition, identify and provide supporting documentation of:

- a. The date each release occurred;**
- b. The cause of each release;**
- c. The amount of each hazardous substance, waste, or pollutant or contaminant released during each release;**
- d. Where each release occurred and what areas were impacted by the release; and**
- e. Any and all activities undertaken in response to each release, including the notification of any local, state, or federal government agencies about the release.**

Follow up Request: Provide a list of all leaks, spills, or other releases which have occurred at or from the Facility which includes all of the information requested above.

As Honeywell stated in its June 5, 2006 response, a substantively identical request regarding leaks and spills was propounded as interrogatory number 3 in the case captioned *U.S. v. AlliedSignal, Inc., et al.*, (Case No. 93-6490; U.S. District Court, Central District of California). A copy of that answer, along with Honeywell's answer to interrogatory number 6, regarding the Kaiser property, is provided for your reference as Exhibit D. Honeywell does not have any information on any leaks, spills, or other releases at the Facility since the date of its interrogatory responses.

Honeywell continues to review historical documents related to the Facility and information previously provided to EPA for information responsive to this request and will supplement its response with additional non-privileged responsive information it locates following that investigation that has not previously been provided to EPA, if any.

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* * *

Please contact me at (212) 715-1186 if you have any additional questions regarding these particular responses.

Sincerely,

A handwritten signature in black ink, appearing to read "Christopher Anderson", written in a cursive style.

Christopher Anderson

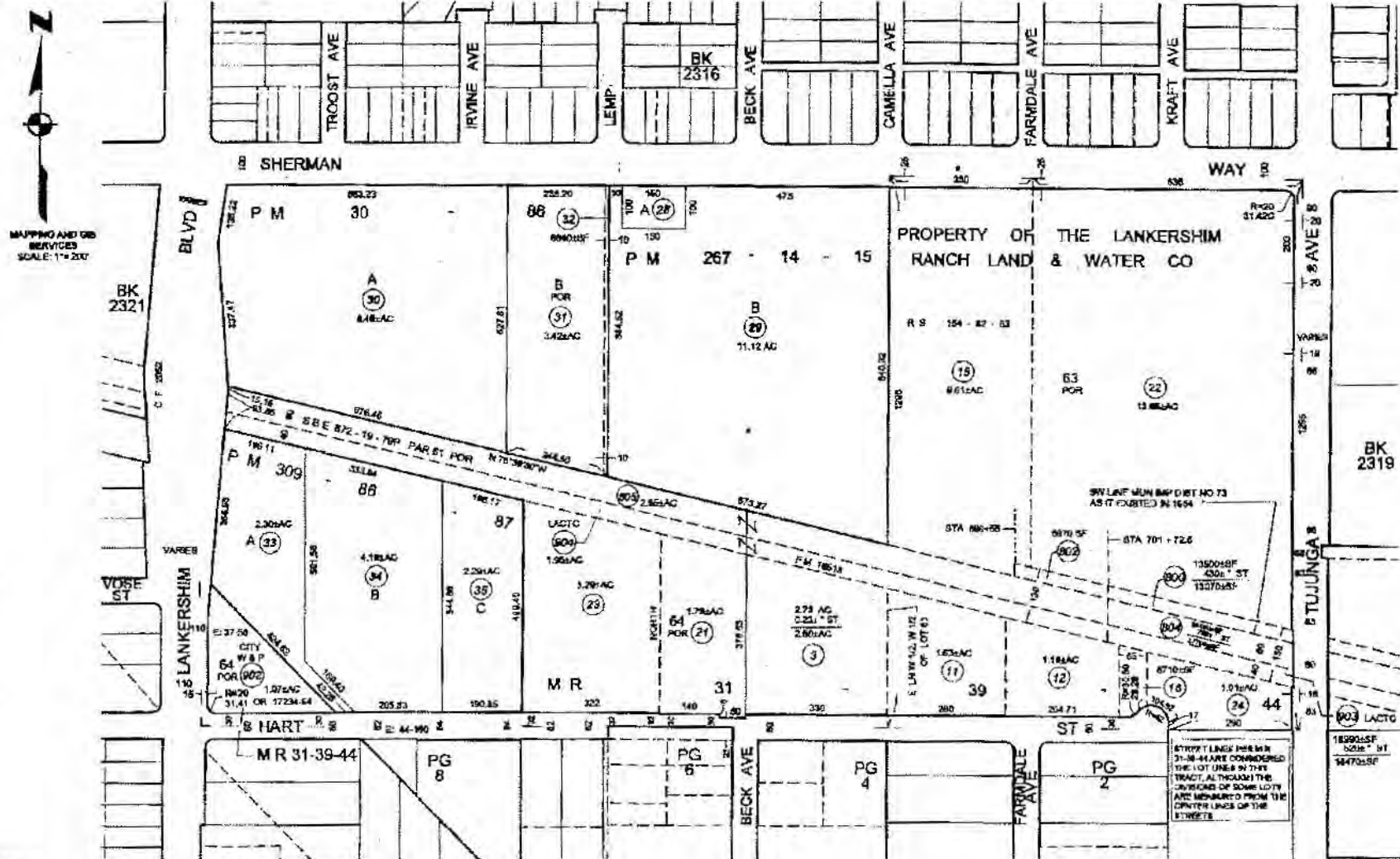
cc: Benny Dehghi
Sean Morris

View Enlarged Map

View Printing Instructions

County of Los Angeles Rick Auerbach, Assessor

2320	1	P.A. 218 - 8 & 15	TRA 13	REVISED PG383 104000003-25 20000118020030072-28	2002050702 2002110407301001-24	2003	SEARCH NO.		OFFICE OF THE ASSESSOR COUNTY OF LOS ANGELES COPYRIGHT © 2002
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97 2007668

RECORDING REQUESTED BY AND
WHEN RECORDED MAIL TO:

North Hollywood Acquisition, L.L.C.
C/O Hugh W. Horne
Senior Vice President
Public Storage, Inc.
P.O. Box 25050
Glendale, California 91221-5050

RECORDED/FILED IN OFFICIAL RECORDS	
RECORDER'S OFFICE	
LOS ANGELES COUNTY	
CALIFORNIA	
DEC 23 1997	AT 8 A.M.

MAIL TAX STATEMENTS TO:

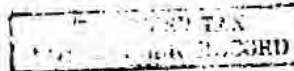
Same as above

STAMP: FEE \$10. CODE 9
(Above Space For Recorder's Use Only)

GRANT DEED

FEE \$13	2
	3

The undersigned grantor declares:



Documentary Transfer Tax not shown pursuant to Section 11932 of the Revenue and Taxation Code.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
*ALLIEDSIGNAL INC., a Delaware corporation ("Grantor") hereby GRANTS to NORTH HOLLYWOOD ACQUISITION, L.L.C., a California Limited Liability Company ("Grantee"), that certain real property (the "Property") located in the City of North Hollywood, County of Los Angeles, State of California, more particularly described in Exhibit A attached hereto and incorporated herein by reference, together with all its right, title and interest in and to all buildings and improvements located on the Property.

Grantor further grants to the Grantee all of the Grantor's right, title and interest in and to all easements, privileges and rights appurtenant to the Property and pertaining to, held and enjoyed in connection therewith and all of the Grantor's right, title and interest in and to any land lying in the bed of any street, alley, road or avenue to the mesne line thereof in front of, or adjoining the Property.

DATED: December 19, 1997

ALLIEDSIGNAL INC.

*as successor by merger to the
Bendix Corporation, a California
Corporation who acquired title
as Bendix Aviation, Ltd.

By:

[Signature]
Its: Director, Real Estate

APN 2320-1-26

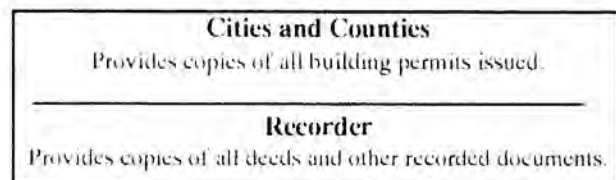
NOTIFICATION

71355534

Kenneth P. Hahn
Los Angeles County Assessor
500 West Temple Street, Los Angeles, CA 90012-2770

For Public Service call (213) 974-3211

How the Property Tax System Works



County Assessor
Assesses all real estate and personal property
(businesses, boats, and airplanes) located
throughout the entire county.



Auditor-Controller
Allocates the money to over 900 local taxing
agencies, including the County, cities, schools,
and special districts.



Treasurer-Tax Collector
Mails out the property tax bills, collects the
money, and deposits it in the County Treasury.



Auditor-Controller
Allocates the money to over 900 local taxing
agencies, including the County, cities, schools,
and special districts.

(fold line)



PLEASE READ YELLOW SHEET FIRST

ALLIEDSIGNAL INC

2525 W 190TH ST
TORRANCE CA 90504

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Los Angeles

On December 19, 1997 before me, Chiyoiko Wada, Notary Public
Date Name and Title of Officer (e.g. "Jane Doe, Notary Public")

personally appeared Philip E. Hammel
Name(s) of Signer(s)

personally known to me - OR - ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Chiyoiko Wada
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

Individual
 Corporate Officer
 Title(s): _____
 Partner — ☐ Limited ☐ General
 Attorney-in-Fact
 Trustee
 Guardian or Conservator
 Other: _____

Signer Is Representing: _____



Signer's Name: _____

Individual
 Corporate Officer
 Title(s): _____
 Partner — ☐ Limited ☐ General
 Attorney-in-Fact
 Trustee
 Guardian or Conservator
 Other: _____

Signer Is Representing: _____



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EXHIBIT A

Parcel B of Parcel Map No. 2128, in the City of Los Angeles, County of Los Angeles, State of California, as per Map filed in Book 30, Page 86, of Parcel Maps, in the Office of the County Recorder of Los Angeles County;

Excepting therefrom Parcels A and B of Parcel Map No. 7108, as per Map filed in Book 267, Pages 14 and 15 of Parcel Maps, in the Office of the County Recorder of Los Angeles County.

EXHIBIT B

NUM	CONTENTS	AUTHOR	DAY	YEAR
10042	FINAL DISPOSITION OF SOIL	T A GLEASON	01/29/	1992
10045.01	HEXAVALENT CHROMIUM AND PARTICULATE EMISSIONS	PETRO-CHEM ENVIRON. SERVICES	04/10/	1987
10090	GROUNDWATER EXTRACTION 1968 - 1991 WATER YEARS IN SAN FERNANDO BASIN			
10312	THIRD AND FOURTH QUARTER SAMPLING AND SUMMARY OF 1992 FIELD ACTIVITIES	CH2M HILL	10/13/	1993
11565	EDD WORKPLAN	T A GLEASON	06/14/	1991
11601	HISTORICAL SURVEY FOR SITE CHARACTERIZATION (PRELIM. DRAFT)	T A GLEASON	05/	1992
11625	PHASE I ENVIRONMENTAL SITE ASSESSMENT FORMER BENDIX FACILITY - (DRAFT)	HARDING LAWSON ASSOCIATES	06/23/	1993
11735	SITE ASSESSMENT VOL. I	LEIGHTON AND ASSOCIATES	01/26/	1989
11735.01	SITE ASSESSMENT VOL. II	LEIGHTON AND ASSOCIATES	01/26/	1989
11745	SITE ASSESSMENT OF THE HYDROCARBON. CONTAM. OVERLAP ROOM	LEIGHTON AND ASSOCIATES	07/07/	1989
11870	DAILY CONSTRUCTION REPORTS & DEMOLITION PERMITS	AlliedSignal		1993
11880	SOIL CHARACTERIZATION WORK PLAN	GROUNDWATER TECH.	08/24/	1992
11891.01	SHALLOW SOIL BORINGSP1-1, SP-2, SP-3, NP-1, NP-2, NP-3, P1-33	GROUNDWATER TECH.	01/11/	1993
11891.02	SHALLOW SOIL BORINGSP1-32, P1-31, P1-30	GROUNDWATER TECH.	01/12/	1993
11891.03	SHALLOW SOIL BORINGSP1-26, P1-27, P1-28, P1-29, SW-25, SW-27, SW-34	GROUNDWATER TECH.	01/14/	1993
11891.04	SHALLOW SOIL BORINGSSW-3, SW-33, SW-21, SW-19, SW-20	GROUNDWATER TECH.	01/19/	1993
11891.05	SHALLOW SOIL BORINGSSW-22, P1-24, P1-25, P1-47	GROUNDWATER TECH.	01/20/	1993

NUM	CONTENTS	AUTHOR	DAY	YEAR
11891.06	SHALLOW SOIL BORINGSP1-46, SW-3, SW-30, SW-2, SW-35, P2-1, P2-2	GROUNDWATER TECH.	01/21/	1993
11891.07	SHALLOW SOIL BORINGSP2-5, P-14, P2-20	GROUNDWATER TECH.	01/22/	1993
11891.08	SHALLOW SOIL BORINGSP1-21, P1-61, P1-5	GROUNDWATER TECH.	01/25/	1993
11891.09	SHALLOW SOIL BORINGSSW-13, SW-12, SW-8, SW-1, SW-4	GROUNDWATER TECH.	01/26/	1993
11891.11	SHALLOW SOIL BORINGSP1-60, P1-62, P1-63, P2-17	GROUNDWATER TECH.	01/28/	1993
11891.12	SHALLOW SOIL BORINGSP1-54, P1-65	GROUNDWATER TECH.	01/29/	1993
11891.13	SHALLOW SOIL BORINGSP2-21, SW-11, P1-4	GROUNDWATER TECH.	02/01/	1993
11891.14	SHALLOW SOIL BORINGSP2-13	GROUNDWATER TECH.	02/02/	1993
11891.15	SHALLOW SOIL BORINGSP2-6, P2-7, P2-8, P2-9, P2-15, BP2-8	GROUNDWATER TECH.	03/15/	1993
11891.16	SHALLOW SOIL BORINGSP2-16, BP2-16	GROUNDWATER TECH.	03/16/	1993
11891.17	SHALLOW SOIL BORINGSSW-14, SW-15, SW-16, SW-17, SW-18, T-1, T-2, T-5	GROUNDWATER TECH.	03/17/	1993
11891.18	SHALLOW SOIL BORINGSP2-3, P2-4, P2-18, P2-19, P2-23A, P2-23B, BP2-3, BP2-18, BP2-23A	GROUNDWATER TECH.	03/17/	1993
11891.19	SHALLOW SOIL BORINGSP1-8, P1-9, P1-39B, P1-41, P2-24, T-3, T-4, BP1-39B, BP1-41	GROUNDWATER TECH.	03/18/	1993
11891.21	SHALLOW SOIL BORINGSP1-34, P1-35, P1-36, P1-37, P1-38, P1-39A, P1-40, BP1-34, BP1-35, BP1-40	GROUNDWATER TECH.	03/19/	1993
11891.22	SHALLOW SOIL BORINGSP1-34, P1-35, P1-36, P1-37, P1-38, P1-39A, P1-40, BP1-34, BP1-35, BP1-40	GROUNDWATER TECH.	03/19/	1993
11891.23	SHALLOW SOIL BORINGSP1-34, P1-35, P1-36, P1-37, P1-38, P1-39A, P1-40, BP1-34, BP1-35, BP1-40	GROUNDWATER TECH.	03/19/	1993
11891.24	SHALLOW SOIL BORINGSP1-55, P2-12, SW-28, SW-29	GROUNDWATER TECH.	03/22/	1993
11891.25	SHALLOW SOIL BORINGSP1-55, P2-12, SW-28, SW-29	GROUNDWATER TECH.	03/22/	1993

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11891.26	SHALLOW SOIL BORINGSBP1-51, BSW-26, P1-34, P1-50, P1-51, SW-24, SW-26F	GROUNDWATER TECH.	03/23/	1993
11891.27	SHALLOW SOIL BORINGSBP1-59, SW-6, SW-7, SW-9, SW-10, SW-23, SW-32	GROUNDWATER TECH.	03/24/	1993
11891.28	SHALLOW SOIL BORINGSBP1-59, SW-6, SW-7, SW-9, SW-10, SW-23, SW-32	GROUNDWATER TECH.	03/24/	1993
11891.29	SHALLOW SOIL BORINGSBP1-10, P1-11, P1-56	GROUNDWATER TECH.	03/29/	1993
11891.31	SHALLOW SOIL BORINGSBP1-48, P1-49, P1-43, P1-42, P1-44	GROUNDWATER TECH.	04/05/	1993
11891.32	SHALLOW SOIL BORINGSBP1-64, P1-16, P1-18	GROUNDWATER TECH.	04/06/	1993
11891.34	SHALLOW SOIL BORINGSBP1-18, P1-53	GROUNDWATER TECH.	04/07/	1993
11891.35	SHALLOW SOIL BORINGSBP1-52, P1-14, P1-15, P1-17, P1-19, P1-45, P1-20, P1-22	GROUNDWATER TECH.	04/08/	1993
11891.36	SHALLOW SOIL BORINGSBP1-23, T-6, T-7, T-8, T-10, T-11, T-12, T-13	GROUNDWATER TECH.	04/09/	1993
11891.37	SHALLOW SOIL BORINGSBP1-3, P1-58, P1-57A, CCP1-48, CCP1-49	GROUNDWATER TECH.	04/12/	1993
11893.01	STEP-OUT AND DEEPER BORNGSSBSW-15B, SBSW-36, SBSW-37, SBSW-38, SBSW-39, SBSW-40, SBSW-41	GROUNDWATER TECH.	06/30/	1993
11893.02	STEP-OUT AND DEEPER BORNGSSBSW-42, SBSW-43, SBSW-44, SBSW-45, SBP1-66, SBP1-69 (1 OF 3)	GROUNDWATER TECH.	06/30/	1993
11893.03	STEP-OUT AND DEEPER BORNGSSBSW-42, SBSW-43, SBSW-44, SBSW-45, SBP1-66, SBP1-69 (2 OF 3)	GROUNDWATER TECH.	06/30/	1993
11893.04	STEP-OUT AND DEEPER BORINGSSBSW-42, SBSW-43, SBSW-44, SBSW-45, SBP1-66, SBP1-69 (3 OF 3)	GROUNDWATER TECH.	06/30/	1993
11893.05	STEP-OUT AND DEEPER BORINGSBP1-80, P1-81, P1-82, P1-83, P1-84, P1-85, P1-86 (1 OF 2)	GROUNDWATER TECH.	07/01/	1993
11893.06	STEP-OUT AND DEEPER BORINGSBP1-80, P1-81, P1-82, P1-83, P1-84, P1-85, P1-86 (2 OF 2)	GROUNDWATER TECH.	07/01/	1993
11893.07	STEP-OUT AND DEEPER BORINGSBP1-88, SBP1-91, SBP1-92, SBP1-93, SBP1-94, SBP1-95, SBP1-96, SBP1-97	GROUNDWATER TECH.	07/02/	1993
11893.08	STEP-OUT AND DEEPER BORINGSSBP1-76, SBP1-77, SBP1-78	GROUNDWATER TECH.	07/06/	1993

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11893.09	STEP-OUT AND DEEPER BORINGSSBP1-79, SBP1-87, SBP1-89, SBP1-90, SBP2-25, SBP2-26, SBP2-27	GROUNDWATER TECH.	07/07/	1993
11893.11	STEP-OUT AND DEEPER BORINGSSBP1-67, SBP2-28, SBP2-29, SBP2-30, SBP1-98, SBP1-99 (2 OF 3)	GROUNDWATER TECH.	07/08/	1993
11893.12	STEP-OUT AND DEEPER BORINGSSBP1-67, SBP2-28, SBP2-29, SBP2-30, SBP1-98, SBP1-99 (3 OF 3)	GROUNDWATER TECH.	07/08/	1993
11893.13	STEP-OUT AND DEEPER BORINGSSBP1-68	GROUNDWATER TECH.	07/09/	1993
11893.14	STEP-OUT AND DEEPER BORINGSSBP1-73, SBP1-75, SBP1-38B (1 OF 3)	GROUNDWATER TECH.	07/13/	1993
11893.15	STEP-OUT AND DEEPER BORINGSSBP1-73, SBP1-75, SBP1-38B (2 OF 3)	GROUNDWATER TECH.	07/13/	1993
11893.16	STEP-OUT AND DEEPER BORINGSSBP1-73, SBP1-75, SBP1-38B (3 OF 3)	GROUNDWATER TECH.	07/13/	1993
11893.17	STEP-OUT AND DEEPER BORINGSSBP1-70, SBP1-71, SBP1-72, SBP1-100, SBP1-101, SBP1-102 (1 OF 2)	GROUNDWATER TECH.	07/12/	1993
11893.18	STEP-OUT AND DEEPER BORINGSSBSW-46 (1 OF 2)	GROUNDWATER TECH.	07/14/	1993
11893.19	STEP-OUT AND DEEPER BORINGSSBSW-46 (2 OF 2)	GROUNDWATER TECH.	07/14/	1993
11920.01	SLAB REMOVAL ANALYTICAL DATA	GROUNDWATER TECH.	06/30/	1993
11921	INVEST. REPORT SHALLOW SOIL BORINGS - VOLUME 1	GROUNDWATER TECH.	07/16/	1993
11922	INVEST. REPORT SHALLOW SOIL BORINGS - VOLUME 2; TABLES 3B 5	GROUNDWATER TECH.	07/16/	1993
12005	RESULTS OF GW MONT. FIRST QUARTER 1994 VOL I	SEACOR	04/18	1994
12005.01	RESULTS OF GW MONT. FIRST QUARTER 1994 VOL II 1 OF 2	SEACOR	05/31/	1994
12005.02	RESULTS OF GW MONT. FIRST QUARTER 1994 VOL II 2 OF 2	SEACOR	05/31/	1994
12007	RESULTS OF GW MONT. SECOND QUARTER 1994 VOL I	SEACOR	10/27/	1994
12007.01	RESULTS OF GW MONT. SECOND QUARTER 1994VOL. 2	SEACOR	10/27/	1994

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12009	RESULTS OF GW MONT. THIRD AND FOURTH QUARTER 1994VOL. 1	SEACOR	05/04/	1995
12019.11	RESULTS OF GW MONT. FIRST AND SECOND QUARTERS 1996 VOL. II BOOK 2 OF 2	SECOR	05/14	1997
12019.12	RESULTS OF GW MONT. FIRST AND SECOND QUARTERS 1996 VOL III BOOK 1 OF 2	SECOR	05/14	1997
12019.13	RESULTS OF GW. MONT. FIRST AND SECOND QUARTERS 1996 VOL. III BOOK 2 OF 2	SECOR	05/14	1997
12019.14	RESULTS OF GW. MONT. FIRST AND SECOND QUARTERS 1996 VOL. II BOOK 1 OF 2 (HOME DEPOT)	SECOR	05/14	1997
12019.15	RESULTS OF GW MONT. FIRST AND SECOND QUARTERS 1996 VOL. II BOOK 2 OF 2 (HOME DEPOT)	SECOR	05/14	1997
12019.16	RESULTS OF GW MONT. FIRST AND SECOND QUARTERS 1996 VOL. III BOOK 1 OF 2	SECOR	05/14	1997
12019.17	RESULTS OF GW MONT. FIRST AND SECOND QUARTERS 1996 VOL. III BOOK 2 OF 2	SECOR	05/14	1997
12019.18	RESULTS OF GW. MONT. FIRST AND SECOND QUARTERS 1996 VOL. I	SECOR	07/02	1997
12019.19	RESULTS OF GW MONT. THIRD AND FOURTH QUARTERS 1996 VOL. I	SECOR	10/15	1997
12019.21	RESULTS OF GW MONT. THIRD AND FOURTH QUARTERS 1996 VOL. I	SECOR	10/15	1997
12019.22	RESULTS OF GW MONT. THIRD AND FOURTH QUARTERS 1996 VOL. II (THIRD QUARTER 1996) BOOK 1 OF 2	SECOR	10/15	1997
12019.23	RESULTS OF GW MONT. THIRD AND FOURTH QUARTERS 1996 VOL. II (THIRD QUARTER 1996) BOOK 2 OF 2	SECOR	10/15	1997
12019.24	RESULTS OF GW MONT. THIRD AND FOURTH QUARTERS 1996 VOL. III (FOURTH QUARTER 1996) BOOK 1 OF 2	SECOR	10/15	1997
12019.25	RESULTS OF GW MONT. THIRD AND FOURTH QUARTERS 1996 VOL. III (FOURTH QUARTER 1996) BOOK 2 OF 2	SECOR	10/15	1997
12019.26	RESULTS OF GW MONT. FIRST QUARTER '97 VOLUME I	SECOR	11/25	1997
12019.27	RESULTS OF GW MONT. FIRST QUARTER '97 VOLUME 1	SECOR	01/05	1998
12023	RESULTS OF SOIL GAS SURVEY	SEACOR	06/13/	1994

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12027.01	BIMONTHLY SOIL GAS MONITORING JULY 1995	hydrologue, INC.	11/24/	1995
12027.02	BIMONTHLY SOIL GAS MONITORING SEPTEMBER 1995	hydrologue, INC.	12/28/	1995
12027.03	BIMONTHLY SOIL GAS MONITORING NOVEMBER 1995	hydrologue, INC.	01/18/	1996
12027.04	BIMONTHLY SOIL GAS MONITORING JANUARY 1996	hydrologue, INC.	04/16/	1996
12037	SOIL SAMPLING AND ANALYSIS FOR IDENTIFICATION OF CONTAMINATION, TANK 8	LEIGHTON AND ASSOCIATES	12/19/	1986
12100.01	ADDENDUM REMEDIAL ACTION PLAN SHALLOW SOIL IMPACTED BY TOTAL PET. HYDROCAR. (TPH)	hydrologue, Inc.	09/	1994
12101	SUPPLEMENTARY SITE INVEST. & AMENDED REMEDIAL ACTION PLAN SHALLOW SOIL IMPACTED BY TOTAL PET. HYDROCAR. (TPH)	hydrologue, Inc.	09/19/	1994
12105.001	CLOSURE REPORT EXCAVATION AND TREATMENT OF SHALLOW SOIL IMPACTED BY TOTAL PET. HYDROCARBONS(TPH)	HYDROLOGUE, INC.	01/28/	1995
12105.002	CLOSURE REPORT EXCAV.& TREAT. OF SHALLOW SOIL IMPACTED BY TPH APPEND. E-F1	HYDROLOGUE, INC.	01/28/	1995
12105.003	CLOSURE REPORT EXCAV.& TREAT. OF SHALLOW SOIL IMPACTED BY TPH APPDX. F1-F2	HYDROLOGUE, INC.	01/28/	1995
12105.004	CLOSURE REPORT EXCAV.& TREAT. OF SHALLOW SOIL IMPACTED BY TPH APPEND. F2-G	HYDROLOGUE, INC.	01/28/	1995
12106	COMPACTION REPORT EXCAV. AND TREATMENT OF SHALLOW SOIL IMPACTED BY TPH	HYDROLOGUE, INC.	02/07/	1995
12107.01	REVISED DRAFT VOLATILE ORGANIC COMPOUND ISOCONCENTRATION CONTOUR MAPS (FIG. 2-37)	HYDROLOGUE, INC.	02/05/	1995
12171	FIRST QUARTER 1992 GROUNDWATER MONT. REPORT	T A GLEASON	04/30/	1992
12248	SAMPLING & ANALYTICAL PLAN FOR GROUNDWATER MONT. PROGRAM	SEACOR	10/21/	1992
12259	REMEDIAL INVEST. OF GROUNDWATER CONTAMIN. VOLUME 1	JAMES M. MONTGOMERY	12/	1992
12300	WORKPLAN FOR MONITOR WELL INSTALLATION	GROUNDWATER TECH. INC.	01/28/	1993
12310.01	GROUNDWATER MONT. JANUARY 1993 - VOLUME II (1 OF 2)	SEACOR	02/12/	1993

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12310.02	GROUNDWATER MONT. JANUARY 1993 - VOLUME II (2 OF 2)	SEACOR	02/12/	1993
12340.01	WORK PLAN FOR WELL ABANDONMENT	SEACOR	04/14/	1993
12341	CRWQCB - L.A. REGION WELL INVEST. PROGRAM QA/QC REPORT	AlliedSignal	07/12/	1993
12361	REPORT OF WELL ABANDONMENT	SEACOR	07/21/	1993
12434.01	PLANT 1, EQUIPMENT #'S 1-171	AlliedSignal	04/	1992
12434.02	PHOTODOCUMENTATION REPORT	GROUNDWATER TECH.	8/10	1993
12434.03	GROUNDWATER WELL INSTAL(7-91,; SITE WALK THRU 7-91) - VOLUME I	AlliedSignal		
12434.04	PRE-DEMOLITION CLEAN-UP - VOLUME 2	AlliedSignal		
14310	WORKPLAN FOR SOIL GAS INVESTIGATION	REMEDIAL ACTION CORPORATION	06/30/	1993
10050	WATER WELL STATUS REPORT: STATIC DEPTH OF WATER	NORTH HOLLYWOOD GROUP		
10150	DATA FOR WELLS WITHIN - MILE RADIUS OF SITE	BENDIX SUPERFUND		
10313	1991 WASTE REPORT FOR EDD 11800 SHERMAN WAY	AlliedSignal	03/31/	1992
10316.001	REAL ESTATE PURCHASE AGREEMENT AND JOINT ESCROW INSTRUCTIONS	AlliedSignal	09/30/	1993
10316.002	HYDROLOGIC ANALYSIS FOR THE HOME DEPOT HORTH HOLLYWOOD, CALIFORNIA	Nolte and Associates, Inc.	07/18/	1994
10316.004	NORTH HOLLYWOOD LEASE	AlliedSignal	10/08/	1993
10316.005\ (12100.01.2)	GEOTECHNICAL INVESTIGATION PROPOSED HOME DEPOT NORTH HOLLYWOOD, CA	GEOTECHNICAL PROFESSIONALS INC.	05/10/	1994
10530	THIRD QUAR.1993 GROUNDWATER MONT. AND WASTE DISCHARGE DATA BRADLEY	WASTE MGT OF NORTH AMERICA	10/	1993
11544	QUARTERLY GROUNDWATER MONITORING REPORT FIRST QUARTER 2003	PARSONS ENGINEERING SCIENCE	04/15	2003

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11544.1	QUARTERLY GROUNDWATER MONITORING REPORT SECOND QUARTER 2003	PARSONS ENGINEERING SCIENCE	07/15	2003
11544.10	SUBMITTAL OF WASTE DISCHARGE REQUIREMENTS PERMIT APPLICATION AND SUPPLEMENTAL INFORMATION	MWH	5/31	2005
11544.11	SUBMITTAL OF GROUNDWATER MONITORING REPORT, SECOND QUARTER 2005	MWH	7/15	2005
11544.2	QUARTERLY GROUNDWATER MONITORING REPORT THIRD QUARTER 2003	PARSONS ENGINEERING SCIENCE	10/15	2003
11544.3	QUARTERLY GROUNDWATER MONITORING REPORT FOURTH QUARTER 2003	PARSONS ENGINEERING SCIENCE	01/15	2004
11544.4	QUARTERLY GROUNDWATER MONITORING REPORT FIRST QUARTER 2004	PARSONS ENGINEERING SCIENCE	4/15	2004
11544.5	QUARTERLY GROUNDWATER MONITORING REPORT SECOND QUARTER 2004	PARSONS ENGINEERING SCIENCE	7/15	2004
11544.6	SOIL VAPOR EXTRACTION PERFORMANCE REPORT SECOND QUARTER 2004	PARSONS ENGINEERING SCIENCE	7/30	2004
11544.6.1	SOILMAND INTERIM GROUNDWATER REMEDIAL ACTION PLAN	PARSONS ENGINEERING SCIENCE	7/30	2004
11544.7	GROUNDWATER MONITORING REPORT THIRD QUARTER 2004	MWH	10/15	2004
11544.8	GROUNDWATER MONITORING REPORT FOURTH QUARTER 2004	MWH	1/14	2005
11544.9	INTALLATION REPORT OFF-SITE GROUNDWATER MONITORING WELLS GW11-GW12A, GW-16, AND GW17-2 COPIES	MWH	6/29	2005
11545	ASSESSMENT WORKPLAN ADDENDUM-EMERGING CHEMICALS & CHROMIUM IN THE UNSATURATED & SATURATED ZONES	PARSONS ENGINEERING SCIENCE	03/31	2003
11546	TECHNICAL REPORT AND REMEDIAL INVESTIGATION WORKPLAN FOR CHROMIUM	PARSONS ENGINEERING SCIENCE	12/07	2001
11547	SOIL VAPOR EXTRACTION PERFORMANCE REPORT FIRST QUARTER 2003	PARSONS ENGINEERING SCIENCE	04/30	2003
11548	INTERIM GROUNDWATER REMEDIAL ACTION PLAN FOR CHROMIUM	PARSONS ENGINEERING SCIENCE	06/30	2003
11549	REVISED REMEDIAL INVESTIGATION WORKPLAN FOR CHROMIUM AND EMERGING CHEMICALS	PARSONS ENGINEERING SCIENCE	06/30	2003
11549.1	PERMIT TO CONSTRUCT/OPERATE R-F56654	PARSONS ENGINEERING SCIENCE	07/21	2003

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11550	PRELIMINARY SITE ASSESSMENT OF HYDROCARBON CONTAMINATION IN THE VICINITY BENEATH THE OVERLAP TEST STAND ROOM LOCATED AT BENDIX CORP. 11600 SHERMAN WAY	LEIGHTON & ASSOC.	07/07	1989
11551	PRELIMINARY INVESTIGATION REPORT FOR CHROMIUM AND EMERGING CHEMICALS	PARSONS ENGINEERING SCIENCE	01/15	2004
11560	ASSES. OF HYDROGEOLOGIC COND. FOR UNDERGROUND STORAGE FACILITIES AT BENDIX	LEIGHTON AND ASSOCIATES	05/29/	1984
11570	QUALITY ASSURANCE PROJECT PLAN - SITE CHARACTERIZATION	T A GLEASON	04/24/	1991
11580	WORK PLAN SITE CHARACTERIZATION	T A GLEASON	04/24/	1991
11590	SITE CHARACTERIZATION	T A GLEASON	02/17/	1992
11595.010.1	WIP LISTING OF FACILITIES BY FACILITY NAME W/IN 1MILE	EPA		
11595.010.2	WIP LISTING OF FACILITIES BY FACILITY NAME W/IN 1MILE	EPA/AlliedSignal		
11600	PRELIMINARY DRAFT HISTORICAL SURVEY FOR SITE CHARACTERIZATION	ALLIEDSIGNAL	06/	1991
11610	ACM SURVEY AND SAMPLING RESULTS (DRAFT REPORT)	T A GLEASON	06/25/	1992
11620	DOCUMENTATION OF MASTER PLAN ACTIVITIES (DRAFT RPT)	T A GLEASON	06/25/	1992
11626	SOIL VAPOR EXTRACTION SYSTEM DESIGN - OPERATION & MAINTENANCE MANUAL (ENVIROSUPPLY & SER., INC.)	PARSONS ENGINEERING SCIENCE	10/22	2001
11627	SOIL VAPOR EXTRACTION SYSTEM RAP	PARSONS ENGINEERING SCIENCE	12/13	2001
11628	SOIL VAPOR EXTRACTION PERFORMANCE REPORT FIRST QUARTER 2002 (1Q02)	PARSONS ENGINEERING SCIENCE	04/30	2002
11629	PERFORMANCE REPORT FOURTH QUARTER 2002 SOIL VAPOR EXTRACTION	PARSONS ENGINEERING SCIENCE	01/31	2003
11631	SOIL VAPOR EXTRACTION PERFORMANCE REPORT SECOND QUARTER 2003	PARSONS ENGINEERING SCIENCE	07/31	2003
11632	SOIL VAPOR EXTRACTION PERFORMANCE REPORT THIRD QUARTER 2003	PARSONS ENGINEERING SCIENCE	11/06	2003
11633	SOIL VAPOR EXTRACTION PERFORMANCE REPORT FOURTH QUARTER 2003	PARSONS ENGINEERING SCIENCE	01/30	2004

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11635	SOIL VAPOR EXTRACTION PERFORMANCE REPORT FIRST QUARTER 2004	PARSONS ENGINEERING SCIENCE	4/30	2004
11636	SOIL VAPOR EXTRACTION PERFORMANCE REPORT THIRD QUARTER 2004	PARSONS ENGINEERING SCIENCE	10/31	2004
11637	SOIL VAPOR EXTRACTION PERFORMANCE REPORT FOURTH QUARTER 2004	PARSONS ENGINEERING SCIENCE	1/31	2005
11638	GROUNDWATER EXTRACTION WELL (GW-15) INSTALLATION LETTER-REPORT - 2 copies	PARSONS ENGINEERING SCIENCE	6/3	2004
11640	OPERATION AND MAINTENANCE PLAN FOR WATER TREATMENT SYSTEM ALLIEDSIGNAL AEROSPACE 11600 SHERMAN WAY NORTH HOLLYWOOD, CALIFORNIA	AlliedSignal		
11641	REVISED WORKPLAN AMENDING REVISED RI WORKPLAN DATED JUNE 2003	PARSONS ENGINEERING SCIENCE	7/23	2004
11642	SOIL AND INTERIM GROUNDWATER REMEDIAL ACTION WORKPLAN	MWH	7/30	2004
11643	DATA PACKAGE TO SUPPORT PROPOSED REMEDIATION / 2 Volumes	MWH	6/30	2004
11644	GROUNDWATER EXTRACTION WELL INSTALLATION (GW-15) AND DRAWDOWN DATA FROM DEVELOPMENT	PARSONS ENGINEERING SCIENCE	MAY	2004
11645	SOIL VAPOR EXTRACTION PERFORMANCE REPORTS, FOURTH QTR 2001, 1ST QUARTER 2002, 2ND QUARTER 2002, AND 3RD QUARTER 2002	PARSONS ENGINEERING SCIENCE	11/13	2002
11646 11646.CD	GROUNDWATER MONITORING REPORT FIRST QUARTER 2005	MWH AMERICAS	4/15	2005
11647	SOIL VAPOR EXTRACTION PERFORMANCE REPORT	PARSONS ENGINEERING SCIENCE	4/30	2005
11648	Soil Vapor Extraction Progress Report Second Quarter 2005	MWH	7/27	2005
11680	DATA ACQ. AND ASSES. OF HYDROGEOLOGIC COND. FOR UNDERGROUND STORAGE FAC.	LEIGHTON AND ASSOCIATES	10/15/	1984
11690	TANK 11 BORING SOIL SAMPLES AND ANALYSES	LEIGHTON AND ASSOCIATES	06/05/	1985
11700	SOIL SAMPLING AND ANAL. FOR SUMP AREA ADJACENT TO TANK 11	LEIGHTON AND ASSOCIATES	08/16/	1985
11710	SOIL SAMP. AND ANAL. FOR IDENTIFICATION OF CONTAMIN. PLUME TANK 13 SITE	LEIGHTON AND ASSOCIATES	06/23/	1986

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11720 .	SOIL SAMP. AND ANAL. FOR IDENTIFICATION OF CONTAMIN. TANK 8 EXCAVATION	LEIGHTON AND ASSOCIATES	12/19/	1986
11730 .	INSTALLATION OF GROUNDWATER MONT. WELL TANK 13 SITE TO IDENT. CONTAM. PLUME	LEIGHTON AND ASSOCIATES	07/24/	1987
11740 .	CHEMICAL TEST RESULTS OF TWO SOIL SAMPLES FROM A TRENCH IN OVERLAP TEST ROOM	LEIGHTON AND ASSOCIATES	01/26/	1989
11750./ 17375.01.0(N)	MASTER PLAN FOR SITE CHARACTER. AND DEVELOP.OF A REMEDIATION PLAN FOR EDD	LEIGHTON AND ASSOCIATES, INC.	08/10/	1989
11751./ 17375.01.2(N)	MASTER PLAN FOR SITE CHARACTER. AND DEVELOP.OF A REMEDIATION PLAN FOR EDD	LEIGHTON AND ASSOCIATES, INC.	09/18/	1989
11769 .	LABORATORY ANALYSES - VOLUME I	T A GLEASON	10/30/	1991
11770 .	LABORATORY ANALYSES - VOLUME II	T A GLEASON	10/30/	1991
11780 .	LABORATORY ANALYSES - VOLUME III	T A GLEASON	10/30/	1991
11790 .	WORK PLAN SITE CHARACTERIZATION - SOIL	T A GLEASON	12/19/	1991
11800 .	LABORATORY ANALYSES - VOLUME I	T A GLEASON	01/31/	1992
11810 .	LABORATORY ANALYSES - VOLUME II	T A GLEASON	01/31/	1992
11820 .	LABORATORY ANALYSES - VOLUME III	T A GLEASON	01/31/	1992
11830 .	HAZ. MAT. AND EQUIPMENT SURVEYS/WORK PLANS PRE-DRILLING CLEAN-UP (DRAFT)	T A GLEASON	03/	1992
11840 .	WORK PLAN/SAMPLING PLAN SOIL CHARACTERIZATION	T A GLEASON	03/30/	1992
11850 .	HEALTH AND SAFETY PLAN	T A GLEASON	05/15/	1992
11851	HEALTH AND SAFETY PLAN (EMERGENCY) ALLIEDSIGNAL AEROSPACE COMPANY, NORTH HOLLYWOOD, CA	GROUNDWATER TECH.	09/01/	1992
11890 .	SOIL CHARACTERIZATION WORK PLAN	GROUNDWATER TECH.	09/01/	1992
11891.10	SHALLOW SOIL BORINGSP1-6, P1-7, P1-60	GROUNDWATER TECH.	01/27/	1993

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11891.20	SHALLOW SOIL BORINGSP1-8, P1-9, P1-39B, P1-41, P2-24, T-3, T-4, BP1-39B, BP1-41	GROUNDWATER TECH.	03/18/	1993
11891.30	SHALLOW SOIL BORINGSP1-12, P1-13, P1-02, P1-01	GROUNDWATER TECH.	03/30/	1993
11893.10	STEP-OUT AND DEEPER BORINGSSBP1-67, SBP2-28, SBP2-29, SBP2-30, SBP1-98, SBP1-99 (1 OF 3)	GROUNDWATER TECH.	07/08/	1993
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11920 .	OUTSIDE SOIL BORING ANALYTICAL RESULTS	GROUNDWATER TECH.	4/12/	1993
11930 .	INVEST. REPORT SHALLOW SOIL BORINGS - VOLUME 3 (APPENDICES)	GROUNDWATER TECH.	07/16/	1993
11935.	ANALYTICAL RESULTS OF CONCRETE	AlliedSignal	07/27/	1993
11950 .	SOIL GAS SURVEY REPORT	GROUNDWATER TECH.	07/30/	1993
11960 .	CONCRETE SLAB CHARACTERIZATION AND SAMPLING REPORT	GROUNDWATER TECH.	08/10/	1993
11970 .	STEP-OUT AND DEEPER SOIL BORING REPORT	GROUNDWATER TECH.	09/15/	1993
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12000.01	RESULTS OF GW MONT. FOURTH QTR. '93 VOL. II	SEACOR	01/27	1994
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6
7
8 UNITED STATES DISTRICT COURT
9 CENTRAL DISTRICT OF CALIFORNIA
10

11 UNITED STATES OF AMERICA,)

12 Plaintiff,)

13 v.)

14 ALLIEDSIGNAL, INC., et al.,)

15 Defendants.)

16
17 STATE OF CALIFORNIA, on behalf of the)
State Department of Toxic Substances Control,)

18 Plaintiff,)

19 v.)

20 ALLIEDSIGNAL, INC., et al.,)

21 Defendants.)

22
23 AND RELATED CROSS-COMPLAINTS)
24
25
26
27
28

Case No. 93-6490 MRP (Tx)
(Consolidated Actions)

DEFENDANT ALLIEDSIGNAL'S
RESPONSE TO PLAINTIFFS
UNITED STATES OF AMERICA
AND STATE OF CALIFORNIA'S
FIRST JOINT SET OF
INTERROGATORIES

Hon. Ralph J. Geffen
Special Master

1 Pursuant to Rule 33 of the Federal Rules of Civil Procedure, Defendant
2 AlliedSignal, Inc. ("Allied") hereby responds to Plaintiffs United States of America and State
3 of California's (collectively "Plaintiffs") First Joint Set of Interrogatories (the
4 "Interrogatories"). Allied hereby responds as follows:

5 GENERAL OBJECTIONS AND RESPONSES

6 A. Allied bases its following responses on the assumption that in
7 propounding these Interrogatories, Plaintiffs do not intend to seek information protected
8 against discovery by virtue of the attorney-client privilege or the attorney work-product
9 doctrine, or which is otherwise subject to a privilege. To the extent that Plaintiffs'
10 Interrogatories, or any part thereof, are intended to discover such information, Allied objects
11 and asserts these privileges to the fullest extent provided by law.

12 B. Allied has not completed discovery or preparation for trial in this
13 matter. Accordingly, these responses are made without prejudice to Allied's rights to present
14 additional documents or evidence at trial or other proceedings in this action.

15 C. Allied further objects to the Interrogatories, and to each Interrogatory
16 therein, on the ground they are overly broad; without reasonable particularity; not reasonably
17 limited in scope and time; and burdensome and oppressive, in that several of the
18 Interrogatories would require the compilation of information from documents Allied has
19 already made available to Plaintiffs. Creating such a compilation would require the same
20 effort by Allied as by Plaintiffs, and Allied therefore exercises its option under Rule 33(d) to
21 designate documents previously produced and available to Plaintiffs as the source of the
22 information sought by Plaintiffs.

23 D. Allied objects to Plaintiffs' Interrogatories insofar as these
24 Interrogatories attempt to define "hazardous substance" (Definition A) for purposes of this set
25 of interrogatories to include substances not relevant to the subject matter of Plaintiffs' First
26 Amended Complaints (the "Complaints") and not reasonably calculated to lead to the
27 discovery of admissible evidence. For purposes of its response, Allied has interpreted

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1 "hazardous substance" to mean only those substances containing the volatile organic
2 compounds trichloroethylene ("TCE") and tetrachloroethylene ("PCE").

3 E. Allied objects to Plaintiffs' Interrogatories insofar as these
4 Interrogatories attempt to define "you" and "your" (Definition D) to include all of its parent
5 and subsidiary companies, and all of its and its parent and subsidiary companies' officers,
6 directors, employees, agents, attorneys, consultants, and other representatives. To the extent
7 that these Interrogatories seek documents prepared or maintained by Allied's employees,
8 attorneys or consultants which are protected by the attorney-client privilege or work product
9 doctrine or otherwise privileged from discovery, Allied objects to such Interrogatories and
10 responds that it will not produce privileged documents. Allied further objects to the
11 Interrogatories, and to each Interrogatory therein, on the ground that they seek proprietary,
12 confidential, trade secret, and similarly protected documents and information of Allied and
13 third parties. Subject to other objections set forth herein, Allied will produce proprietary,
14 confidential, trade secret, and similarly protected information of Allied subject to the
15 Stipulation of the Parties and Order Governing Protection of Confidential Business
16 Information and Other Protected Matter executed by the Parties to this action. Allied will
17 not produce proprietary, confidential, trade secret or similarly protected information of third
18 parties without the prior consent of those third parties.

19 F. Allied objects to Plaintiffs' Interrogatories to the extent they seek
20 information regarding facilities or real property other than the Allied property located at
21 11510 and 11600 Sherman Way, North Hollywood, California (the "Allied Property").
22 Facilities or real property other than the Allied Property are not the subject matter of
23 Plaintiffs' Complaints against Allied in this litigation. In particular, Allied objects that the
24 Plaintiffs' Interrogatories seeks information about property owned by Kaiser Permanente and
25 located at 11666 Sherman Way, North Hollywood, California (the "Kaiser Property"), which
26 property is not addressed in the Plaintiffs' Complaints. Allied objects that Plaintiffs'
27 Interrogatories regarding the Kaiser Property are oppressive and unduly burdensome.

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1 G. Allied further objects to the Interrogatories to the extent they require
2 Allied conduct any study, investigation, inquiry or testing other than that which has already
3 been performed by Allied or is currently within Allied's possession.

4 RESPONSES TO INTERROGATORIES

5 INTERROGATORY NO. 1:

6 For each denial of an allegation of the complaints filed in this action by
7 plaintiffs, please state all facts upon which you base each such denial, identify each person
8 who has knowledge relating to each such denial, and identify all documents relating to each
9 such denial.

10 RESPONSE TO INTERROGATORY NO. 1:

11 In response to Interrogatory No. 1, Allied objects that the Interrogatory is
12 vague, ambiguous and overly broad.

13 Without waiving, and subject to, the foregoing general and specific objections,
14 Allied responds as follows: With regard to Allied's denials of paragraphs 7 through 20 of
15 the Plaintiffs' Complaints, paragraphs 30 through 43 of the State's Complaint and paragraphs
16 31 through 44 of the United States' Complaint, Allied's denial is based on its lack of any
17 information about the status of other defendants in this action.

18 With regard to Allied's denial of paragraph 2 of the Complaints, Allied's
19 denial is based upon information and belief that the Plaintiffs' response costs have been
20 incurred in connection with alleged groundwater contamination by TCE and PCE and not
21 with regard to alleged soil contamination in the San Fernando Valley.

22 With regard to its denial of paragraph 21 of the Complaints, Allied's denial is
23 based upon information and belief that the North Hollywood Operable Unit ("NHO")
24 boundary is defined by the Plaintiffs and not by the defendants. Plaintiffs' Complaints assert
25 that this boundary is based upon the areal extent of groundwater contamination within the
26 NHO, however, because the contamination under the NHO and the Burbank Operable
27 Unit may overlap, Allied cannot determine the truth or falsity of whether the operable unit

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1 boundaries devised by the Plaintiffs accurately represent separate and distinct areas of alleged
2 groundwater contamination and the areal extent of such contamination.

3 With regard to its denials of paragraph 23 of the Complaints, Allied denies
4 that it contributed to any alleged TCE and PCE contamination in the groundwater under the
5 NHOU and, therefore, lacks information or belief as to whether the TCE and PCE detected
6 in the groundwater in the NHOU were the result of use of TCE and PCE as industrial
7 solvents. Moreover, Allied has no information or belief regarding the number of residents of
8 the San Fernando Valley that may use groundwater from the SFVB.

9 With regard to its denial of paragraph 24 of the Complaints, Allied assumes
10 that these figures are derived from production well testing conducted by Plaintiffs. Likewise,
11 Allied assumes that Plaintiffs' allegations regarding the areal extent of contamination under
12 the SFVB are based on these tests. Allied has not had an adequate opportunity to review the
13 results or accuracy of these tests and therefore lacks information to determine the truth or
14 falsity of these allegations.

15 With regard to its denial of paragraph 25 of the Complaints, Allied bases its
16 denial on the U.S. Environmental Protection Agency's ("EPA's") Record of Decision for a
17 Remedial Action for Area No. 1 of the San Fernando Valley Superfund Site dated September
18 23, 1987 (the "Record of Decision"), which states that the goal of the interim action in the
19 NHOU was to contain the plume of groundwater contamination and to prevent migration of
20 such contamination.

21 With regard to its denial of paragraph 26 of the Complaints, Allied denies that
22 the aeration wells were properly designed, located, installed and operated to achieve the
23 stated goals because TCE and PCE concentrations in the vicinity of the Allied Property have
24 increased in a progressive, unstable manner, which indicates that the plume of TCE and PCE
25 is continuing to migrate to the northwest and away from the aeration wells and that such
26 wells have failed to contain the plume.

27 With regard to its denial of paragraph 27 of the Complaints, Allied denies
28 having any information or belief as to when the extraction and treatment contemplated by the

1 cooperative agreement became operational, because such information is solely within the
2 knowledge of the Plaintiffs.

3 With regard to its denial of paragraph 30 of the United States' Complaint and
4 paragraph 29 of the State's Complaint, Allied denies that any substances allegedly released
5 on the Allied Property contaminated the groundwater underlying the SFVB. Plaintiffs have
6 failed to provide reliable scientific evidence supporting their theory that groundwater under
7 the SFVB was contaminated through soil gas vapors. Sampling conducted by Allied indicates
8 that any TCE or PCE in soil that could be attributable to Allied only extends to a maximum
9 depth of sixty to eighty feet below the ground surface. The water table beneath the Allied
10 Property is more than 200 feet below ground surface. Moreover, there is no evidence of
11 pathways of TCE or PCE in the soil under the Allied Property to support the EPA's theory
12 that contamination in the groundwater is caused by soil vapors emanating from releases on or
13 near the surface of the Allied Property.

14 With regard to its denial of paragraph 46 of the United States' Complaint and
15 paragraph 45 of the State's Complaint, Allied references the facts supporting its denial of
16 paragraph 30 of the United States' Complaint and paragraph 29 of the State's Complaint.
17 Allied further denies having any information or belief as to whether the facilities of other
18 defendants have experienced releases.

19 With regard to its denial of paragraph 49 of the United States' Complaint and
20 paragraph 48 of the State's Complaint, Allied based this denial on its lack of information or
21 belief, because the United States and the State have provided no evidence with regard to their
22 alleged response costs, including whether such costs were inconsistent with the National
23 Contingency Plan in effect at the time such costs were incurred. Allied is informed and
24 believes that the NHOU interim remedy and aeration wells were not designed, located,
25 installed or operated to accomplish the stated goals in that, among other things, certain
26 physical parameters used to design the remedy were inconsistent with actual measured values
27 found in the underlying aquifer, one of eight aeration wells was not successfully installed and
28 has not been operated for extraction, and the aeration wells and surrounding production well

1 fields have not been pumped at their respective volumes necessary and appropriate to achieve
2 plume containment.

3 **INTERROGATORY NO. 2:**

4 For each affirmative defense you raise against the claims of plaintiffs, please
5 state all facts upon which you base each such defense, identify each person who has
6 knowledge relating to each such defense, and identify all documents relating to each such
7 defense.

8 **RESPONSE TO INTERROGATORY NO. 2:**

9 In response to Interrogatory No. 2, Allied objects that the Interrogatory is
10 vague, ambiguous and overly broad.

11 Without waiving, and subject to, the foregoing general and specific objections,
12 Allied responds as follows:

13 With regard to Allied's first affirmative defense, Plaintiffs have provided no
14 information regarding the date on which they initiated physical on-site construction of the
15 remedial action. Therefore Allied is unable to determine if the action was brought with
16 respect to the Allied Property within the specified limitations period under
17 Section 113(g)(2)(B) of CERCLA, 42 U.S.C. § 9613(g)(2)(B).

18 With regard to Allied's third affirmative defense, Allied responds that the
19 United States and the State have provided no evidence with regard to their alleged response
20 costs, including whether such costs were inconsistent with the National Contingency Plan in
21 effect at the time such costs were incurred.

22 With regard to Allied's first, fourth, fifth, sixth and seventh affirmative
23 defenses, Allied responds as follows: During the period from 1982 to 1995, Allied, through
24 its consultants Leighton & Associates, T. A. Gleason & Associates, Groundwater
25 Technology, Inc., SECOR and Hydrologue, Inc., has conducted extensive soil and
26 groundwater investigations of the Allied Property, drilling over 200 soil borings, sampling
27 over 240 soil gas points, and installing eleven groundwater monitoring wells. These
28 investigations were overseen by and performed with the approval of the California Regional

1 Water Quality Control Board for the Los Angeles Region (the "Regional Board"), in an
2 effort to identify any TCE or PCE in soil, soil gas or groundwater underlying or in the
3 vicinity of the Allied Property. As part of these substantial investigations, Allied identified
4 and removed Tank 13, an underground storage tank containing waste oil. Leighton &
5 Associates installed a monitoring well, W-1, in the southwest corner of the Allied Property
6 near the former location of Tank 13 to determine if groundwater had been impacted by any
7 release from the tank. Two samples taken from each of two screened intervals in well W-1
8 in 1987 contained no detectable TCE or PCE. The soil previously surrounding this tank was
9 completely excavated and removed by 1988. Based on these test results, the Regional Board,
10 which had monitored the excavation and removal of Tank 13 in 1985, and the installation of
11 well W-1 in 1987 and the soil excavation in 1988, approved the abandonment and closure of
12 well W-1.

13 Beginning in the 1970s and increasing in the 1980s, large-volume pumping by
14 the City of Los Angeles Department of Water and Power ("LADWP") escalated in the North
15 Hollywood production well field, located south of the Allied Property, and began to dominate
16 pumping in the Burbank, Erwin and Whitnall well fields. The drawdown in the aquifer
17 associated with this large volume pumping from particular North Hollywood production wells
18 combined to create a cone of depression in the area of the aquifer immediately surrounding
19 the North Hollywood wells, pulling TCE and PCE contaminants from the south into the
20 vicinity of the wells. At times, this pumping and the resulting cone of depression pulled
21 water and contaminants against the regional gradient, which flows southeast in its natural
22 state (i.e., absent pumping). Consequently, sampling in certain North Hollywood wells
23 detected levels of TCE and PCE exceeding drinking water standards in the groundwater
24 being extracted and, thereafter, pumping in those wells ceased. In 1988, LADWP
25 commenced pumping in the Rinaldi-Toluca wells located northwest of the Allied Property, as
26 pumping of many of the North Hollywood production wells was phased out. By 1991,
27 however, as a result of sustained, large volume pumping of production wells, the plume of
28 contaminants was pulled to the north from sources off-site of the Allied Property and, as a

1 result of this progressive movement of the plume from southeast to northwest, levels of TCE
2 and PCE in the groundwater beneath certain areas of the NHOU have increased. In 1993,
3 pumping in the NHOU shifted further northwest when LADWP began pumping from the
4 Tujunga well field.

5 To address groundwater quality in the SFVB, LADWP as early as 1983
6 advocated locating its wells at a distance from the observed TCE and PCE plumes and then
7 alternate pumping of those production wells in an effort to move the TCE and PCE plumes
8 back and forth under the NHOU in the hope of diluting the contaminants. See LADWP,
9 Preferential Groundwater Pumping and Water Level Management Report, January 1983.
10 Sampling of groundwater quality in Allied's groundwater monitoring wells in 1987 and after
11 mid-1991 showed progressively increasing unstable spikes in TCE concentrations in certain
12 wells, indicating that water containing TCE appears to be advancing beneath the Allied
13 Property as the cone of depression is pulled northwest by the pumping of the LADWP's
14 production wells in the Rinaldi-Toluca and Tujunga well fields.

15 In further support of its fifth affirmative defense, Allied responds that
16 beginning in August 19, 1987, and on several occasions thereafter, the EPA issued to Allied
17 a series of Requests for Information under Section 104(e) of CERCLA, 42 U.S.C.
18 § 9604(3). By September 23, 1987, the EPA had approved its Record of Decision to
19 construct and implement the interim remedy. Operation of the interim remedy began in
20 1989, yet EPA failed to send to Allied any demand letter for payment of alleged response
21 costs in the NHOU until March 1993, nearly six years after the signing of the ROD.

22 **INTERROGATORY NO. 3:**

23 Describe each incident that has occurred during your period of ownership or
24 operation of the Allied facility in which any hazardous substance has leaked, spilled or has
25 otherwise been released into the environment. For each such occurrence:

- 26 a. state the type and quantity of the substance that was leaked, spilled or
27 otherwise released;
28 b. state the location at which the leakage, spill or other release occurred;

- c. state the date on which the leak, spill or other release occurred, or if unknown, state the date on which it was discovered;
- d. state the cause of the incident;
- e. state all actions, if any, taken by you or any other person in response to the incident;
- f. identify all persons with knowledge of such incident; and
- g. identify any reports or other documents relating to the incident.

RESPONSE TO INTERROGATORY NO. 3:

In response to Interrogatory No. 3, Allied objects that the Interrogatory is vague, ambiguous and overly broad as to the meaning of the term "incident." Furthermore, Allied objects that the Interrogatory exceeds the scope of permissible discovery in that it seeks information relating to substances released "into the environment" even though the allegations of the Complaints focus solely on releases to soil and groundwater. Allied will limit its responses to releases to soil or groundwater. Allied objects that the Interrogatory seeks information which is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence in that it seeks information about substances, other than TCE and PCE, which are not encompassed by the allegations in the Plaintiffs' Complaints.

Accordingly, Allied will limit its responses to releases to soil of substances containing TCE or PCE which occurred at the Allied Property. In addition, Allied objects that this Interrogatory requires Allied to produce a compilation of documents previously produced to Plaintiffs. In its response, Allied will reference those documents containing the information requested by Plaintiffs in accordance with Rule 33. Finally, Allied objects to this Interrogatory to the extent that it calls for information contained in documents protected by the attorney-client or work product privilege or otherwise protected from discovery under Rule 26 (b)(3) or (4).

Without waiving, and subject to, the foregoing general and specific objections, Allied responds as follows: Allied is not currently aware of any information with respect to occurrences of leaks, spills or other releases to soil, except for releases of substances

1 containing PCE, TCE and other VOCs in low concentrations from the vicinity of three
2 underground storage tanks -- Tanks 8, 11 and 13. There have also been releases of
3 petroleum products, however these substances are subject to CERCLA's petroleum exclusion
4 and are excluded from the definition of hazardous substances in CERCLA. All such
5 petroleum releases were investigated and remediated under the oversight and with the
6 approval of the Regional Board. The information requested can be compiled and obtained
7 from the documents previously produced by Allied in responses to the Plaintiffs' Requests
8 for Information Under CERCLA Section 104(e), 42 U.S.C. § 9604(e), and from the
9 documents previously produced by Allied in response to Plaintiffs' First Joint Set of Requests
10 for Production of Documents which are identified in Exhibit A as responsive to Interrogatory
11 3. Exhibit A includes references to (i) Leighton & Associates' reports regarding releases
12 discovered from Tanks 8, 11 and 13 and certain related investigations, and (ii) reports of
13 Allied's inspection of hazardous waste storage areas at the Allied Property which were
14 situated on containment pads rather than on soil.

15 **INTERROGATORY NO. 4:**

16 Please describe the nature of your activities and operations at the Kaiser
17 facility, including, without limitation, the use, handling, storage, treatment, recycling,
18 transportation, or disposal of hazardous substances and including, but not limited to, the
19 nature of your activities and operations at each "improvement" described in the Appraisal by
20 William S. Crosbie on behalf of the Bendix Corporation, dated May 11, 1970 (Appendix E
21 to Allied's July 21, 1992 Section 104(e) Information Request Response, at pp. 15-16,
22 hereafter "the Appraisal"). For each such activity or operation, please state or identify:

- 23 a. the date(s) the activity or operation commenced and terminated;
- 24 b. the hazardous substance(s) involved in each such activity or operation;
- 25 c. the identity of those individuals responsible for using, handling,
26 storing, treating, recycling, transporting, or disposing of each
27 hazardous substance listed in response to item (b), above; and

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1 d. a detailed description of the processes involved in the activity or
2 operation.

3 **RESPONSE TO INTERROGATORY NO. 4:**

4 In response to Interrogatory No. 4, Allied objects that the Interrogatory is
5 vague, ambiguous and overly broad as to the meaning of the terms "activities and operations"
6 and "processes." Allied further objects that the Interrogatory seeks information which is
7 neither relevant nor reasonably calculated to lead to the discovery of admissible evidence in
8 that it seeks information relating to the Kaiser Property and relating to substances, other than
9 TCE or PCE, which are not encompassed by the allegations of the Plaintiffs' Complaints.

10 Without waiving, and subject to, the foregoing general and specific objections,
11 Allied responds as follows: Prior to the sale of the Kaiser Property to Home Savings of
12 America in 1970, the Kaiser Property contained the following primary areas: the Allied
13 Engineering Building and associated structures, adjacent oil, chemical and metal storage
14 areas, a hot oil building, a Missile Test Silo owned by the United States Government and a
15 large parking lot. The Engineering Building and associated structures were used for office
16 space, light electronics assembly, manufacturing and testing, and laboratory space. The hot
17 oil building was used to store hydraulic oils. The use of the Missile Test Silo is set forth in
18 the response to Interrogatory No. 5 below. Allied is not currently aware of the dates such
19 activities or operations commenced or terminated (other than the dates of construction of
20 various structures as set forth in the Appraisal by William S. Crosbie of the Roy C. Seeling
21 Co., dated May 11, 1970 to which Plaintiffs' Interrogatory refers), and Allied believes that
22 such activities or operations by Allied on the Kaiser Property terminated during or before
23 1970. Allied is not aware of what hazardous substances, if any, were involved in such
24 activities or operations on the Kaiser Property or of any individuals responsible for any such
25 hazardous substances.

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1 **INTERROGATORY NO. 5:**

2 Please describe all information in your possession concerning the reference in
3 the Appraisal to the Missile Test Silo in the West Area as being "owned by U.S.
4 government," including, but not limited to, any information concerning:

- 5 a. the identity of the division, department or other United States
6 government entity that allegedly owned the Missile Test Silo;
7 b. the activities and operations carried out at the Missile Test Silo during
8 such period of alleged ownership;
9 c. the time period of such alleged ownership;
10 d. the identity of those individuals with knowledge of such alleged
11 ownership, activities, and operations; and
12 e. the identity of any reports or other documents relating to such alleged
13 ownership, activities, and operations.

14 **RESPONSE TO INTERROGATORY NO. 5:**

15 In response to Interrogatory No. 5, Allied objects that the Interrogatory is
16 vague, ambiguous and overly broad. Allied objects that the Interrogatory seeks information
17 which concerns matters specifically within the knowledge and control of the Plaintiff United
18 States.

19 Without waiving, and subject to, the foregoing general and specific objections,
20 Allied responds as follows:

21 a. Allied is informed and believes that the Missile Test Silo was owned by
22 departments or agencies of the U.S. Government, such as the Department of Defense or the
23 United States Air Force. Boeing was a prime contractor to the United States Government on
24 the project involving the Missile Test Silo and Allied's predecessor-in-interest was a sub-
25 contractor to Boeing.

26 b. The Missile Test Silo housed a dummy missile used to testing a lifting
27 mechanism for United States military missiles. Components of the mechanism were shipped

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1 to Allied, where they were assembled and a control mechanism designed by Allied was
2 installed.

3 c. Allied is informed and believes that the Missile Test Silo was used for
4 approximately six to seven years, beginning in approximately 1963.

5 d. Allied is in the process of seeking to identify individuals who worked
6 on the Missile Test Silo project and reserves the right to provide additional names of
7 individuals with knowledge regarding the operations of the Missile Test Silo if such
8 information becomes available. To date, Allied has identified the following individuals who
9 worked on the Missile Test Silo project: Al Medock, James Rupp, Doug Longyear, Joe
10 Gunn, Bob Lucas, Russ Johnson.

11 e. Allied is not currently aware of any documents in its possession relating
12 to the United States Government's ownership of, or its activities or operations carried out at,
13 the Missile Test Silo.

14 **INTERROGATORY NO. 6:**

15 Describe each incident that has occurred during your period of ownership or
16 operation of the Kaiser facility in which any hazardous substance has leaked, spilled or has
17 otherwise been released into the environment. For each such occurrence:

- 18 a. state the type and quantity of the substance that was leaked, spilled or
19 otherwise released;
20 b. state the location at which the leakage, spill or other release occurred;
21 c. state the date on which the leak, spill or other release occurred, or if
22 unknown, state the date on which it was discovered;
23 d. state the cause of the incident;
24 e. state all actions, if any, taken by you or any other person in response to
25 the incident;
26 f. identify all persons with knowledge of such incident; and
27 g. identify any reports or other documents relating to the incident.

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1 **RESPONSE TO INTERROGATORY NO. 6:**

2 In response to Interrogatory No. 6, Allied objects that the Interrogatory is
3 vague, ambiguous and overly broad as to the meaning of the term "incident." Furthermore,
4 Allied objects that the Interrogatory exceeds the scope of permissible discovery in that it
5 seeks information relating to substances released "into the environment" even though the
6 allegations of the Complaints focus solely on releases to soil and groundwater. Allied will
7 limit its responses to alleged releases to soil or groundwater. Finally, Allied objects that the
8 Interrogatory seeks information which is neither relevant nor reasonably calculated to lead to
9 the discovery of admissible evidence in that it (i) seeks information about the Kaiser Property
10 and (ii) it seeks information about substances, other than TCE and PCE, which are not
11 encompassed by the allegations of the Plaintiffs' Complaints. Accordingly, Allied will limit
12 its responses to releases of substances containing TCE or PCE to soil. Finally, Allied
13 objects to this Interrogatory to the extent that it calls for information contained in documents
14 protected by the attorney-client or work product privilege or otherwise protected from
15 discovery under Rule 26(b)(3) or (4).

16 Without waiving, and subject to, the foregoing general and specific objections,
17 Allied responds as follows: Allied is not aware of any releases of hazardous substances
18 containing TCE or PCE onto the Kaiser Property during Allied's period of ownership or
19 operation of the Kaiser Property.

20 **INTERROGATORY NO. 7:**

21 State whether you or anyone acting on your behalf ever performed any study
22 or conducted any investigation to determine the existence and extent of any hazardous
23 substances in soils, soil gas, or groundwater at or near the Allied or Kaiser facilities, or the
24 migration of any hazardous substances at, from, or beneath the Allied or Kaiser facilities,
25 including migration through the vadose zone or through groundwater. If your answer is in
26 the affirmative, then for each study:

- 27 a. describe the nature of the study or investigation;
28 b. identify the date(s) on which the study was conducted;

- c. identify all persons who conducted the study;
- d. describe the findings and conclusion of such study; and
- e. identify any reports or documents relating to such study.

RESPONSE TO INTERROGATORY NO. 7:

In response to Interrogatory No. 7, Allied objects that the Interrogatory is overly broad in requesting the identity of any documents "relating to" any study of the existence or extent of hazardous substances in soils, soil gas or groundwater. Allied further objects that this Interrogatory seeks information and/or documents which are privileged from discovery under the attorney-client privilege and attorney work product doctrine under Rule 26(b)(3) or (4). Allied is interpreting this Interrogatory to exclude any request for privileged information and/or documents. Furthermore, Allied objects that the Interrogatory seeks information which is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence in that it seeks information relating to the Kaiser Property and relating to substances, other than TCE or PCE, which are not encompassed by the allegations in the Plaintiffs' Complaints. Accordingly, Allied will limit its responses to identify any non-privileged documents prepared by or on behalf of Allied which comprise or report on any such studies on the release of substances containing TCE or PCE which occurred at the Allied Property. Finally, Allied objects that this Interrogatory requires Allied to produce a compilation of documents previously produced to Plaintiffs in this litigation and in response to Requests for Information under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e). In its response, Allied will reference those documents containing the information requested by Plaintiffs in accordance with Rule 33(d).

Without waiving, and subject to, the foregoing general and specific objections, Allied responds as follows: Yes. A list of those non-privileged documents which are responsive to this Interrogatory and which have not previously been submitted by Allied in response to Requests for Information under CERCLA Section 104(e), 42 U.S.C. § 9604(e), are attached as Exhibit A.

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1 **INTERROGATORY NO. 8:**

2 State whether you or anyone acting on your behalf ever performed any study
3 or conducted any investigation to determine the flow of groundwater to, from, or within the
4 SFVB or NHOU. If your answer is in the affirmative, then for each study:

- 5 a. describe the nature of the study or investigation;
6 b. identify the date(s) on which the study was conducted;
7 c. identify all persons who conducted the study;
8 d. describe the findings and conclusion of such study; and
9 e. identify any reports or documents relating to such study.

10 **RESPONSE TO INTERROGATORY NO. 8:**

11 In response to Interrogatory No. 8, Allied objects that the Interrogatory is
12 overly broad in requesting the identity of any documents "relating to" any study of flow of
13 groundwater in the SFVB or NHOU. Allied further objects that this Interrogatory seeks
14 information and/or documents which are privileged from discovery under the attorney-client
15 privilege and attorney work product doctrine under Rule 26(b)(3) or (4). Allied is
16 interpreting this Interrogatory to exclude any request for privileged information and/or
17 documents. Finally, Allied objects that this Interrogatory requires Allied to produce a
18 compilation of documents previously produced to Plaintiffs in this litigation and in response
19 to Requests for Information under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e). In its
20 response, Allied will reference those non-privileged documents requested by Plaintiffs in
21 accordance with Rule 33(d).

22 Without waiving, and subject to, the foregoing general and specific objections,
23 Allied responds as follows: Yes. A list of those non-privileged documents which are
24 responsive to this Interrogatory and which have not previously been submitted in response to
25 Requests for Information under CERCLA Section 104(e), 42 U.S.C. § 9604(e), are attached
26 as Exhibit A.

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1 **INTERROGATORY NO. 9:**

2 For each Interrogatory, identify

- 3 a. who provided the information upon which your Response is based;
- 4 b. whether that person has personal knowledge of the facts contained in
- 5 the Response; and
- 6 c. if the answer to part (b) of this interrogatory is negative, please identify
- 7 the source of the information provided in the Response.

8 **RESPONSE TO INTERROGATORY NO. 9:**

9 In response to Interrogatory No. 9, Allied responds as follows:

10 1. William Wolff compiled the list of documents identified as Exhibit A

11 regarding Allied's responses to Interrogatory Nos. 3, 7 and 8;

12 2. Based on his review of non-privileged documents including the studies

13 and investigations identified in response to Interrogatory Nos. 7 and 8, Behrooz Dehghi

14 contributed to the responses to Interrogatory Nos. 1, 2, 3, 7 and 8. He has personal

15 knowledge of studies and investigations conducted since early 1994 and has reviewed studies

16 and investigations dating back to fall 1993.

17 3. Ralph Vick contributed to Allied's responses to Interrogatory Nos. 3,

18 4, 5, and 6 and has personal knowledge regarding activities on the Allied Property from

19 approximately the mid-1950s to the late 1980s and on the Kaiser Property from

20 approximately the mid-1950s to 1970.

21 4. Royce Brannum contributed to Allied's responses to Interrogatory Nos.

22 3, 4, 5, and 6 and has personal knowledge regarding activities on the Allied Property from

23 approximately the late 1960s to the late 1980s and on the Kaiser Property from

24 approximately the late 1960s to 1970.

25 **INTERROGATORY NO. 10:**

26 Do you contend that any other person or entity, including any party named in

27 this litigation, has released hazardous substances at the NHOU, or contributed hazardous

28 substances to the groundwater beneath the NHOU? If so, please identify:

- a. each such person or entity in question;
- b. all facts upon which you base your contentions;
- c. all persons with knowledge of the facts listed in response to subpart (b); and
- d. all documents relating to your contentions.

RESPONSE TO INTERROGATORY NO. 10:

In response to Interrogatory No. 10, Allied objects that the Interrogatory is burdensome, oppressive and overly broad in purporting to require Allied to identify sources or potential sources of TCE and PCE in groundwater in the NHOU. Furthermore, Allied objects that this Interrogatory seeks information and/or documents which are privileged from discovery under the attorney-client privilege and attorney work product doctrine under Rule 26(b)(3) or (4). Allied is interpreting this Interrogatory to exclude any request for privileged information and/or documents. Allied objects that the Interrogatory seeks information which is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence in that it seeks information relating to substances, other than PCE or TCE, which are not encompassed by the allegations in the Plaintiffs' Complaints. Likewise, Allied objects that the Interrogatory seeks information relating to any release of hazardous substances at the NHOU, although the allegations in the Complaints focus solely on alleged releases to soil or groundwater.

Without waiving, and subject to, the foregoing general and specific objections, Allied responds as follows: Yes. Allied believes that there are hundreds of potential sources of TCE and/or PCE located in the North Hollywood and Burbank areas which have or may have contributed TCE and/or PCE to the groundwater in the NHOU. Plaintiffs have greater access to the public information necessary to identify those sources and, unlike Allied, Plaintiffs have statutory authority to gain access to property and documents and to compel information from owners, operators and/or other persons associated with such sources.

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Information on such sources is in Plaintiffs' possession in the EPA Records Center and the files of the Regional Board.

DATED: November 20, 1995

Respectfully submitted,

LATHAM & WATKINS

Gene A. Lucero

Charles F. Weiss

Michelle M. Carroll

By *Michelle M. Carroll*
Michelle M. Carroll
Attorneys for Defendant
AlliedSignal, Inc.

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6 **EXHIBIT A TO DEFENDANT ALLIEDSIGNAL'S**
7 **RESPONSE TO PLAINTIFFS UNITED STATES OF AMERICA AND STATE OF**
8 **CALIFORNIA'S FIRST JOINT SET OF INTERROGATORIES**
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AlliedSignal's response to first set of interrogatories

In Response to Item #	From Bates#	To Bates #	Date	Author: Company Originator	Description
3.g	108,529	108,683	1989	AlliedSignal Facility Operations	Hazardous Waste Storage Areas Inspection Forms - Tank Inspections See bates pages 108,538, 108,555, 108,574 and 108,589.
3.g	108,991	109,096	1986	AlliedSignal Facility Operations	Hazardous Waste Storage Areas Inspection Forms - See bates pages 109,006, 109,028, 109,038, 109,043, 109,050 and 109,053.
3.g	109,098	109,161	1985	AlliedSignal Facility Operations	Hazardous Waste Storage Areas Inspection Forms - See bates pages 109,117, and 109,121.
3.g	108,837	108,988	1987	AlliedSignal Facility Operations	Hazardous Waste Storage Areas Inspection Forms - See bates page 108,964.
3.g	109,216	109,242	1983	AlliedSignal Facility Operations	Hazardous Waste Storage Areas Inspection Forms - See bates pages 109,241 and 109,242.
3.g & 7.e	40,103	40,113	6/5/85	Leighton & Associates	Soil Sampling and Analysis of Tank 11 Boring
3.g & 7.e	40,116	40,120	8/16/85	Leighton & Associates	Soil Sampling and Analysis of Sump Area Adjacent to Tank 11.

AlliedSignal's response to first set of interrogatories

3.g & 7.e	40,123	40,199.01	6/23/86	Leighton & Associates	Soil Sampling and Analysis for Identification of Contamination Plume in the Vicinity of Tank 13 Site.
3.g & 7.e	40,202	40,234	12/19/86	Leighton & Associates	Soil Sampling and Analysis for Identification of Contamination, Tank 8 Excavation
3.g & 7.e	40,239	40,410	7/24/87	Leighton & Associates	Installation of Ground Water Monitoring Well W-1 for Identification of Contamination Plume in the Vicinity of Tank13
3.g & 7.e	41,398	41,410	1/26/89	Leighton & Associates	Chemical Test Results of Two Soil Samples Collected from a Trench Inside the Overlap Test Stand Room
3.g & 7.e	41,412	41,513	1/7/89	Leighton & Associates	Preliminary Site Assessment of Hydrocarbon Contamination in the Vicinity Beneath the Overlap Test Stand Room
7.e	39,334	39,348	5/29/84	Leighton & Associates	Phase I - Preliminary Assessment of Hydrogeologic Conditions Related to a Leak Detection Program for Underground Storage Facilities
7.e	39,375	39,572	11/14/90	T.A. Gleason & Assoc.	Quality Assurance Project Plan Phase I Site Characterization
7.e	39,574	39,605.00	4/24/91	T.A. Gleason & Assoc.	Work Plan Phase I Site Characterization

AlliedSignal's response to first set of interrogatories

7.e	40,081	40,102	10/15/84	Leighton & Associates	Phase II - Data Acquisition and Assessment of Hydrogeologic Conditions Related to a Leak Detection Program for Underground Storage Facilities at NH Facility
7.e	41,515	41,822	10/30/91	T.A. Gleason & Assoc.	Laboratory Analysis for Project Np. ASASD NHCA 004 (Vol. I)
7.e	41,825	42,125.01	10/30/91	T.A. Gleason & Assoc.	Laboratory Analysis for Project Np. ASASD NHCA 004 (Vol. II)
7.e	42,128	42,356	10/30/91	T.A. Gleason & Assoc.	Laboratory Analysis for Project Np. ASASD NHCA 004 (Vol. III)
7.e	42,359	42,422	12/19/91	T.A. Gleason & Assoc.	Phase II Site Characterization-Soil Workplan
7.e	42,425	42,722	1/31/92	T.A. Gleason & Assoc.	Laboratory Analysis for Project Np. ASASD NHCA 004 (Vol. I)
7.e	42,725	42,967	1/31/92	T.A. Gleason & Assoc.	Laboratory Analysis for Project Np. ASASD NHCA 004 (Vol. II)
7.e	42,970	43,125	1/31/92	T.A. Gleason & Assoc.	Laboratory Analysis for Project Np. ASASD NHCA 004 (Vol. III)
7.e	43,127	43,193	12/19/91	T.A. Gleason & Assoc.	Work Plan/Sampling Plan - Soil Characterization
7.e	43,383	43,663	9/1/92	Groundwater Technology Inc.	Soil Characterization Workplan

7.e	43,665	44,113	1/11/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers SP-1, SP-2, SP-3, NP-1, NP-2, NP-3, P1-33
7.e	44,115	44,500	1/12/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-32, P1-31, P1-30
7.e	44,502	45,335	1/14/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-26, P1-27, P1-28, P1-29, SW-25, SW-27, SW-34
7.e	45,337	45,668	1/19/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers SW-31, SW-33, SW-21, SW-19, SW-20
7.e	45,670	46,125	1/20/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers SW-22, P1-24, P1-25, P1-47
7.e	46,127	46,728	1/21/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-46, SW-3, SW-30, SW-2, SW-35, P2-1, P2-2
7.e	46,730	47,476	1/22/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P2-5, P2-14, P2-20
7.e	47,478	48,054	1/25/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-21, P1-61, P1-5

7.e	48,056	48,335	1/26/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers SW-13, SW-12, SW-8, SW-1, SW-4
7.e	48,337	48,821	1/27/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-6, P1-7, P1-60
7.e	48,822	49,432	1/28/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-60, P1-62, P1-63, P2-17
7.e	49,433	49,517	1/29/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-65, P1-54
7.e	49,518	49,934	2/1/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-4, P2-21, SW-11
7.e	49,935	50,158	2/2/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P2-13
7.e	50,160	50,604	3/15/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P2-6, P2-7, P2-8, P2-9, P2-15, BP2-8
7.e	50,605	51,035	3/16/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P2-16, BP2-16

AlliedSignal's response to first set of interrogatories

7.e	51,036	51,468	3/17/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers SW-14, SW-15, SW-16, SW-17, SW-18, T-1, T-2, T-5
7.e	51,469	51,961	3/17/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P2-3, P2-4, P2-18, P2-19, P2-23A, BP2-23B, BP2-3, BP2-18, BP2-23A
7.e	51,962	52,327	3/18/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-8, P1-9, P1-39B, P1-41, P2-24, BP1-39B, BP1-41, T-3, T-4
7.e	52,328	52,752	3/18/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-8, P1-9, P1-39B, P1-41, P2-24, BP1-39B, BP1-41, T-3, T-4
7.e	52,753	53,178	3/19/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-34, P1-35, P1-36, P1-37, P1-38, P1-39A, P1-40, BP1-34, BP1-35, BP1-40
7.e	53,179	53,596	3/19/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-34, P1-35, P1-36, P1-37, P1-38, P1-39A, P1-40, BP1-34, BP1-35, BP1-40

7.e	53,597	53,772	3/19/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-34, P1-35, P1-36, P1-37, P1-38, P1-39A, P1-40, BP1-34, BP1-35, BP1-40
7.e	53,773	54,054	3/22/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-55, P2-12, SW-28, SW-29
7.e	54,055	54,322	3/22/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-55, P2-12, SW-28, SW-29
7.e	54,323	54,702	3/23/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers BP1-51, BSW-26, P1-34, P1-50, P1-51, SW-24, SW-26
7.e	54,703	55,000	3/24/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-59, SW-6, SW-7, SW-9, SW-10, SW-23, SW-32
7.e	55,001	55,184	3/24/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-59, SW-6, SW-7, SW-9, SW-10, SW-23, SW-32
7.e	55,185	55,559	3/29/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-10, P1-11, P1-56

7.e	55,560	55,674	3/30/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-12, P1-13, P1-02, P1-01
7.e	55,675	55,871	4/5/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-48, P1-49, P1-43, P1-42, P1-44
7.e	55,872	56,109	4/6/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-64, P1-16, P1-18
7.e	56,110	56,187	4/7/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-18, P1-53
7.e	56,188	56,600	4/8/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-52, P1-14, P1-15, P1-17, P1-19, P1-45, P1-20, P1-22
7.e	56,601	56,929	4/9/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-23, T-6, T-7, T-8, T-10, T-11, T-12, T-13
7.e	56,930	57,258	4/12/93	Groundwater Technology Inc.	Shallow Soil Borings Laboratory Analysis, Boring Numbers P1-3, P1-58, P1-57A, CCP1-48, CCP1-49
7.e	57,259	57,337	6/29/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBSW-15B, SBSW-36, SBSW-37, SBSW-38, SBSW-39, SBSW-40, SBSW-41

7.e	57,338	57,775	6/30/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBSW-42, SBSW-43, SBSW-44, SBSW-45, SBP1-66, SBP1-69 (PART 1 OF 3)
7.e	57,776	58,165	6/30/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBSW-42, SBSW-43, SBSW-44, SBSW-45, SBP1-66, SBP1-69 (PART 2 OF 3)
7.e	58,166	58,539	6/30/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBSW-42, SBSW-43, SBSW-44, SBSW-45, SBP1-66, SBP1-69 (PART 3 OF 3)
7.e	58,540	58,902	7/1/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers P1-80, P1-81, P1-82, P1-83, P1-84, P1-85, P1-86 (PART 1 OF 2)
7.e	58,903	59,290	7/1/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers P1-80, P1-81, P1-82, P1-83, P1-84, P1-85, P1-86 (PART 2 OF 2)

AlliedSignal's response to first set of interrogatories

7.e	59,291	59,367	7/2/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-88, SBP1-91, SBP1-92, SBP1-93, SBP1-94, SBP1-95, SBP1-96, SBP1-97
7.e	59,368	59,405	7/6/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-76, SBP1-77, SBP1-78
7.e	59,406	59,495	7/6/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-79, SBP1-87, SBP1-89, SBP1-90, SBP2-25, SBP2-26, SBP2-27
7.e	59,496	59,900	7/8/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-67, SBP2-28, SBP2-29, SBP2-30, SBP1-98, SBP1-99 (PART 1 OF 3)
7.e	59,901	60,305	7/8/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-67, SBP2-28, SBP2-29, SBP2-30, SBP1-98, SBP1-99 (PART 2 OF 3)
7.e	60,306	60,852	7/8/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-67, SBP2-28, SBP2-29, SBP2-30, SBP1-98, SBP1-99 (PART 3 OF 3)
7.e	60,853	61,379	7/9/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-68

7.e	61,380	61,714	7/13/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-73, SBP1-75, SBP1-38B (PART 1 OF 3)
7.e	61,715	62,099	7/13/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-73, SBP1-75, SBP1-38B (PART 2 OF 3)
7.e	62,100	62,595	7/13/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-73, SBP1-75, SBP1-38B (PART 3 OF 3)
7.e	62,596	62,988	7/12/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBP1-70, SBP1-71, SBP1-72, SBP1-100, SBP1-101, SBP1-102 (PART 1 OF 2)
7.e	62,989	63,265	7/14/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBSW-46 (PART 1 OF 2)
7.e	63,266	63,618	7/14/93	Groundwater Technology Inc.	Step Out and Deeper Borings Laboratory Analysis, Boring Numbers SBSW-46 (PART 2 OF 2)
7.e	63,619	63,755	6/16/93	Groundwater Technology Inc.	Workplan for Concrete Slab Characterization and Sampling Program
7.e	63,756	63,968	4/14/93	Groundwater Technology Inc.	Outside Soil Boring Report
7.e	63,969	64,973	3/24/93 - 6/30/93	Groundwater Technology Inc.	Slab Removal Analytical Data
7.e	64,975	65,185	7/16/93	Groundwater Technology Inc.	Investigation Report Shallow Soil Borings Volume 1
7.e	65,186	65,521	7/16/93	Groundwater Technology Inc.	Investigation Report Shallow Soil Borings Volume 2

AlliedSignal's response to first set of interrogatories

7.e	65,522	65,711	7/16/93	Groundwater Technology Inc.	Investigation Report Shallow Soil Borings Volume 3
7.e	65,846	66,053	7/30/93	Groundwater Technology Inc.	Soil Gas Survey Report
7.e	66,054	66,414	8/10/93	Groundwater Technology Inc.	Concrete Slab Characterization and Sampling Report
7.e	66,415	66,918	9/15/93	Groundwater Technology Inc.	Step Out and Deeper Soil Boring Report
7.e	66,919	67,092	5/31/94	SEACOR	Results of Groundwater Monitoring First Quarter 1994
7.e	68,195	68,337	10/27/94	SEACOR	Results of Groundwater Monitoring Second Quarter 1994
7.e	68,970	68,995	12/19/86	Leighton and Associates	Soil Sampling and Analysis Tank 8 Excavation
7.e	68,996	69,020	2/5/87	Leighton and Associates	Soil Sampling and Removal of Contaminated Soil Report
7.e	69,022	69,046	2/25/88	Leighton and Associates	Shoring Design and Backfilling Recommendations for Soil Clean-up Excavation in Vicinity of Tank 13 Site
7.e	69,047	69,054	3/18/88	Leighton and Associates	Supplemental Recommendations for Alternative Shoring System for Soil Clean-up Excavation in Vicinity of Tank 13
7.e	69,055	69,068	5/16/88	Leighton and Associates	Evaluation of Request by Disposal Control, Inc. on Alternate Method of Soil Removal Near Vicinity of Tank 13
7.e	69,069	69,119	4/28/89	Leighton and Associates	Final Report of Soil Removal in Vicinity of Tank 13 Site

7.e	69,120	69,463	4/28/89	Leighton and Associates	Final Report of Soil Removal in Vicinity of Tank 13 Site Volume II
7.e	69,464	69,477	9/1/94	Hydrologue, Inc.	Addendum Remedial Action Plan Shallow Soil Impacted By Total Petroleum Hydrocarbons
7.e	69,478	69,513	5/1/94	Hydrologue, Inc.	Remedial Action Plan Shallow Soil Impacted by Total Petroleum Hydrocarbons
7.e	69,515	69,700	9/19/94	Hydrologue, Inc.	Supplemental Site Investigation and Amended Remedial Action Plan Shallow Soil Impacted by Total Petroleum Hydrocarbons
7.e	69,702	69,881	1/28/95	Hydrologue, Inc.	Closure Report Excavation and Treatment of Shallow Soil Impacted by Total Petroleum Hydrocarbons
7.e	69,883	70,685	1/28/95	Hydrologue, Inc.	Closure Report Excavation and Treatment of Shallow Soil Impacted by Total Petroleum Hydrocarbons Appendix E Through Appendix F-1
7.e	70,687	71,555	1/28/95	Hydrologue, Inc.	Closure Report Excavation and Treatment of Shallow Soil Impacted by Total Petroleum Hydrocarbons Appendix F-1 Through Appendix F-2
7.e	71,557	72,347	1/28/95	Hydrologue, Inc.	Closure Report Excavation and Treatment of Shallow Soil Impacted by Total Petroleum Hydrocarbons Appendix F-2 Through Appendix G
7.e	72,349	72,388	2/7/95	Hydrologue, Inc.	Compaction Report Excavation and Treatment of Shallow Soil Impacted by Total Petroleum Hydrocarbons
7.e	72,390	72,426	2/5/95	Hydrologue, Inc.	Draft Volatile Organic Compound Isoconcentration Contour Maps

7.e & 8.e	72,429	72,437.04	11/18/86	Leighton and Assoc.	Work Plan and Time Table for Installation of Groundwater Monitoring Wells
7.e	72,500	72,544	11/14/90	T.A. Gleason & Associates	Work Plan Soil and Groundwater Site Characterization
7.e & 8.e	72,545	72,597	10/30/91	T.A. Gleason & Assoc	Groundwater Monitor Report 3rd Quarter
7.e & 8.e	72,598	72,658	1/31/92	T.A. Gleason & Assoc	Groundwater Monitor Report 4th Quarter
7.e	72,659	73,123	4/23/92	T.A. Gleason & Assoc	Laboratory Analysis for 1st Quarter 1992 Groundwater Sampling Volume I
7.e	73,124	73,348	4/23/92	T.A. Gleason & Assoc	Laboratory Analysis for 1st Quarter 1992 Groundwater Sampling Volume II
7.e & 8.e	73,349	73,426	4/30/92	T.A. Gleason & Assoc	Groundwater Monitoring Report 1st Quarter 1992
7.e & 8.e	73,487	73,549	7/13/92	T.A. Gleason & Assoc	Groundwater Monitoring Report 2nd Quarter 1992
7.e	73,550	73,805	7/13/92	T.A. Gleason & Assoc	Laboratory Analysis for Groundwater Monitoring Report 2nd Quarter 1992 Volume I
7.e	73,806	74,059	7/13/92	T.A. Gleason & Assoc	Laboratory Analysis for Groundwater Monitoring Report 2nd Quarter 1992 Volume II

AlliedSignal's response to first set of interrogatories

7.e	74,060	74,299	9/21/92	T.A. Gleason & Assoc	Laboratory Analysis for Groundwater Monitoring Report 3rd Quarter 1992 Volume I
7.e	74,300	74,528	9/21/92	T.A. Gleason & Assoc	Laboratory Analysis for Groundwater Monitoring Report 3rd Quarter 1992 Volume II
7.e & 8.e	74,529	74,625	10/8/92	T.A. Gleason & Assoc	Groundwater Monitoring Report 3rd Quarter 1992
7.e & 8.e	74,626	74,769	10/30/92	SEACOR	Sampling and Analytical Plan for Groundwater Monitoring Program
7.e & 8.e	78,113	78,120	1/28/93	Groundwater Technology Inc.	Workplan for Monitor Well Installation
7.e & 8.e	78,121	78,193	2/12/93	SEACOR	Results of Groundwater Monitoring January 1993
7.e & 8.e	80,221	80,289	4/12/93	SEACOR	Results of Groundwater Monitoring First Quarter 1993 Volume I
7.e & 8.e	80,988	81,120	7/12/93	SEACOR	Results of Groundwater Monitoring Second Quarter 1993 Volume I
7.e & 8.e	81,626	81,733	9/7/93	SEACOR	Results of Groundwater Monitoring Third Quarter 1993 Volume I
7.e & 8.e	82,197	82,308	9/30/93	Groundwater Technology Inc.	Off-Site Well Installation and Sampling Report
7.e & 8.e	82,907	83,502	1/27/94	SEACOR	Results of Groundwater Monitoring Fourth Quarter 1993 Volume I

7.e & 8.e	68,338	68,969	10/27/94	SEACOR	Results of Groundwater Monitoring Second Quarter 1994 Volume II
7.e & 8.e	67,093	67,611	5/6/94	SEACOR	Results of Groundwater Monitoring First Quarter 1994 Volume II (1 of 2)
7.e & 8.e	67,612	68,193	5/6/94	SEACOR	Results of Groundwater Monitoring First Quarter 1994 Volume II (2 of 2)
7.e & 8.e	79,232	79,660	4/5/93	SEACOR	Results of Groundwater Monitoring March 1993 Volume II (1 of 2)
7.e & 8.e	78,718	79,230	1/12/93	SEACOR	Results of Groundwater Monitoring January 1993 Volume II (2 of 2)
7.e & 8.e	78,194	78,716	1/12/93	SEACOR	Results of Groundwater Monitoring January 1993 Volume II (1 of 2)
7.e & 8.e	79,662	80,219	4/5/93	SEACOR	Results of Groundwater Monitoring March 1993 Volume II (2 of 2)
7.e & 8.e	81,121	81,594	7/20/93	SEACOR	Results of Groundwater Monitoring Second Quarter 1993 Volume II
7.e & 8.e	81,734	82,196	9/7/93	SEACOR	Results of Groundwater Monitoring Third Quarter 1993 Volume II
7.e & 8.e	82,310	82,901	1/27/94	SEACOR	Results of Groundwater Monitoring Fourth Quarter 1993 Volume II
7.e	106,391	106,808	6/29/94	SEACOR	Results of Soil Gas Survey

PROOF OF SERVICE BY MAIL

I am employed in the County of Los Angeles, State of California. I am over the age of eighteen and not a party to the within action. My business address is that of Latham & Watkins as set forth on the first page of the document to which this Proof is attached.

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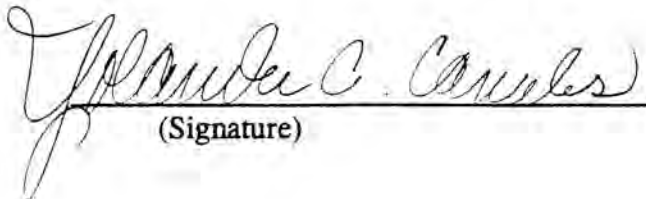
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NORTH HOLLYWOOD OPERABLE UNIT LITIGATION
UNITED STATES v. ALLIEDSIGNAL ET AL.
U.S. DISTRICT COURT FOR THE CENTRAL DISTRICT OF CALIFORNIA
CIV. NO. 93-6490 MRP (Tx)

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SOIL GAS MONITORING SUMMARY

for

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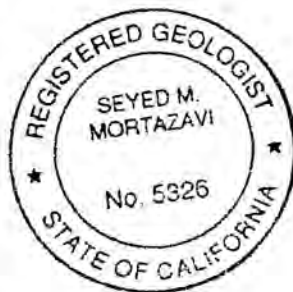
March 3, 1995

Project No. 1131-02

Prepared by:

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hydrologue, Inc.

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Introduction

Hydrologue, Inc. (Hydrologue) is pleased to submit this report to document our recommendations, as related in a meeting March 2, 1995, with the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB). These recommendations are based on work performed in accordance with the *Remedial Action Plan for Shallow Soil Impacted by Volatile Organic Compounds* (Hydrologue Project No. 1131-01, dated May, 1994), at the AlliedSignal Inc. Aerospace Systems and Equipment Site, located at 11600 Sherman Way, North Hollywood, California (the Site, see Figure 1). This report describes briefly the work performed to date and our findings based on the results.

Background

Several subsurface investigations were performed on-site by Leighton & Associates prior to the recent Site characterizations by Groundwater Technology Inc. (GTI) and Hydrologue. The most important of them were the investigation and soil remediation associated with a release from Tank No. 13. The facilities located on the AlliedSignal Site were demolished in 1993. Since then, a comprehensive Site characterization has been performed. The assessment by GTI included three soil gas surveys to a maximum depth of approximately 20 feet bgs. As a part of this Site characterization, GTI also drilled and sampled 197 soil borings in accordance with a workplan approved by the LARWQCB. The results of these assessments are summarized in the following reports:

- *Shallow Soil Boring Report*, dated July 16, 1993, GTI.
- *Step-Out and Deeper Soil Boring Reports*, dated September 15, 1993, GTI.
- *Soil Gas Survey Report*, dated July 30, 1993, Environmental Support Technologies (for GTI).

In the *Step-Out and Deeper Soil Boring Reports*, a comprehensive summary of all soil sample data is included, with areas where Volatile Organic Compounds (VOCs) were detected delineated in a series of depth-specific soil isoconcentration maps and area-specific cross sections. These investigations showed that the total VOC concentration in soil samples decreased rapidly with depth to levels below 50 parts per billion (ppb) or below detection limits at shallow depths. The soil gas report for the Site, dated July 30, 1993, also described low VOC concentrations to depths up to 20 feet bgs. Although there was some variability with depth, the maximum concentrations of VOCs detected at each depth were within the same order of magnitude.

Messrs. Jay Das and Hubert Kang of the LARWQCB Well Investigation Program (WIP) section indicated in a meeting with GTI on September 16, 1993, that deeper soil gas

investigation would be required at the Site. Installation of multi level gas probes (MLGs) was proposed at this meeting.

The vertical and lateral extent of the on-site shallow soil impacted by VOCs was defined by GTI and Hydrologue (see *Supplementary Site Investigation and Amended Remedial Action Plan: Shallow Soil Impacted by Total Petroleum Hydrocarbons*, Hydrologue Report No. 1132-02, dated September 19, 1994). Low concentrations of VOCs were detected in shallow soil in the following areas: the Degreaser area, plating Plant 1; the Overlap area, Plant 1; the Skydrol Building area; and the area of Tank No. 13. As a part of remediation work for shallow soil impacted by Total Petroleum Hydrocarbons (TPH), all shallow soil containing VOCs was excavated and treated, with the exception of a small area at the southwestern corner of the Site, outside the eastern portion of the Site which AlliedSignal intends to transfer to Home Depot, Inc. in the near future for development of a retail center (the "Eastern Parcel") (see *Closure Report, Excavation and Treatment of Shallow Soil Impacted by Total Petroleum Hydrocarbons*, Hydrologue Report No. 1132-03, dated January 28, 1995).

In 1993, a deep soil gas survey (to a maximum depth of 50 feet) was performed by Science and Engineering Analysis Corporation (Seacor), using a cone penetrometer (CPT), on the western and southern edges of the Site, and along the eastern and southern edges of the Kaiser property. Only minor concentrations of VOCs were detected at depths of up to 50 feet bgs. The highest concentration of TCE (78 $\mu\text{g/l}$) was detected in a single soil gas sample taken from a localized area located at the midpoint of the southern boundary of the Kaiser property, at a depth of 50 feet bgs (see *Results of Soil Gas Survey, AlliedSignal Aerospace, 11600 Sherman Way, North Hollywood, California*, Seacor report dated June 29, 1994).

The off-site wells located on the Kaiser property, installed by GTI in 1993, are equipped with gas probes fixed at depths of 50 feet and 150 feet bgs. The soil gas concentrations of these off-site probes were monitored at quarterly intervals by Seacor. Concentrations of VOCs detected in the soil gas probes located at the southern portion of the Kaiser property were significantly higher than those located on the western and northern edges of the Kaiser property. Unstable concentrations of VOCs were detected in these probes. Concentrations were at least one order of magnitude higher in the soil gas probes located at a depth of 150 feet than in those located at a depth of 50 feet. The finding of higher VOC concentrations in the soil gas probes located nearest to the southern boundary of the Kaiser property and in the deeper probe suggested the existence of an off-site source south of the Kaiser property.

The regional groundwater pumping is the most likely explanation, in conjunction with a soil gas source in the vadose zone off-site, for the presence of VOCs detected in gas probes installed at the Site. Hydrologue proposed the installation of MLGs and additional groundwater monitoring wells to define with greater specificity the effects of

regional pumping on the transport of VOCs in groundwater beneath the Site and the surrounding area, and to confirm that no on-site source of VOCs exists which could explain the soil gas findings on the Kaiser property.

Recent Activities

The work performed by Hydrologue as a part of the above-mentioned Remedial Action Plan consisted of the following:

- Installation of ten (10) MLGs, each to a depth of 200 feet bgs.
- Three rounds of soil gas sampling and analytical testing from the recently and previously installed probes.
- Analysis of the test results.
- Interpretation and delineation of VOCs in the off-site and on-site soil gas.

Ten MLGs were successfully installed at the Site and the Kaiser property. The MLGs are equipped with stainless steel gas probes, installed approximately at depths of 50 feet, 100 feet, 150 feet, and 200 feet. The probes are connected to the surface via half-inch Teflon tubing. Nine of the ten MLGs were installed on the Site, and one MLG was installed at the southern boundary of the Kaiser property. Five of the nine on-site MLGs were installed on the Eastern Parcel. The locations of the MLGs are shown in Figure 2.

Soil vapor samples were collected from the recently installed gas probes, as well as from gas probes installed in the boreholes of groundwater monitoring wells located on the Kaiser property, by Transglobal Environmental Geochemistry (TEG), of Solana Beach, California, a soil gas survey contractor pre-qualified by the LARWQCB, under the observation of Hydrologue geologists. Samples were collected December 7 through 9, 1994, December 20 through 23, 1994, and January 23 through 25, 1995. The analytical test results submitted by TEG were reported in three separate reports, dated December 18, 1994, December 28, 1994, and January 31, 1995 (Appendices A, B, and C, respectively). The results are presented graphically as isoconcentration contours of VOCs, such as Total Petroleum Hydrocarbons (TPH), Trichloroethene (TCE) and concentration levels of 1,1,1-Trichloroethane (1,1,1-TCA), 1,1-Dichloroethene (1,1-DCE), Tetrachloroethene (PCE), and Carbon Dioxide (CO₂) (See Figures 3 through 37).

The five MLGs on the Eastern Parcel have consistently shown either no detectable VOCs or very low VOC concentrations in soil gas. The highest VOC concentration at each MLG location on the Eastern Parcel (and at each of the four MLGs on the remainder of the Site) occurs only in the probe closest to groundwater, and the VOC concentrations exhibit no trend between the surface and groundwater. There is no indication that any source of the VOCs detected in soil gas or in groundwater beneath the Site is located on the Eastern Parcel. If such a source existed on the Eastern Parcel, higher VOC

concentrations would be expected in MLGs at shallower depths than 200 feet. Instead, data from the MLGs indicate an off-site source, either in the vadose zone south of the Kaiser property or from underlying groundwater transported by regional pumping, for VOCs detected in soil gas on the Site.

The highest VOC concentrations were detected in soil gas probes installed in MLG-1, located on the Kaiser property south of monitoring well GW-10 and west of GW-7 at depths of 100 feet and 150 feet. The TPH and TCE isoconcentration contour shapes and trends indicate an off-site source located southwest of MLG-1, probably across the Southern Pacific Right-of-Way south of the Kaiser property. The vertical distribution of the VOCs, on the southern and eastern edges of the Kaiser property, are probably more influenced by the VOCs located in the vadose zone off-site than by VOCs migrating upward from groundwater. This is not the case for the Site, and particularly the Eastern Parcel, where the VOCs in soil gas originate from groundwater, rather than from off-site vadose zone contamination.

VOC concentrations detected in soil vapor samples collected during the first and second rounds of the soil gas surveys were similar. Concentrations of VOCs increased nearly threefold during the third round of the soil gas survey, although on-site VOC concentrations remained low. This appears not to be related to the age of the probes, since the same phenomenon was observed for soil gas probes installed in the boreholes of monitoring wells GW-10 and GW-7 in 1993. The ratio of concentrations of VOCs in soil gas samples collected from GW-10 at a depth of 150 feet during the second and third rounds of the survey is similar to that of MLG-1. This may indicate that during the third sampling round, the soil gas plume originating southwest of MLG-1 moved north and further into the adjacent Kaiser property.

Soil gas concentrations increased at approximately the same order of magnitude throughout the Site between the second and third rounds. Low concentrations of VOCs in soil vapor collected from soil gas probes installed in MLG-2, MLG-3, MLG-4, and MLG-6, located around the four sides of former Tank No. 13, compared to higher concentrations of VOCs in soil gas samples collected from probes installed in GW-7, GW-10, and MLG-1, indicate that the source of the VOCs is located on the southwest side of MLG-1, south of the Kaiser property. The ratios of 1,1-DCE, 1,1,1-TCA, and TCE concentrations also indicate that the source is not located at the Site, but south of the Kaiser property, and probably across the Southern Pacific Right-of-Way. Even with the change in VOC concentrations in the third round of sampling, at the 200-foot level closest to the groundwater from which the soil gas originated on the Eastern Parcel, these unstable concentrations remained very low.

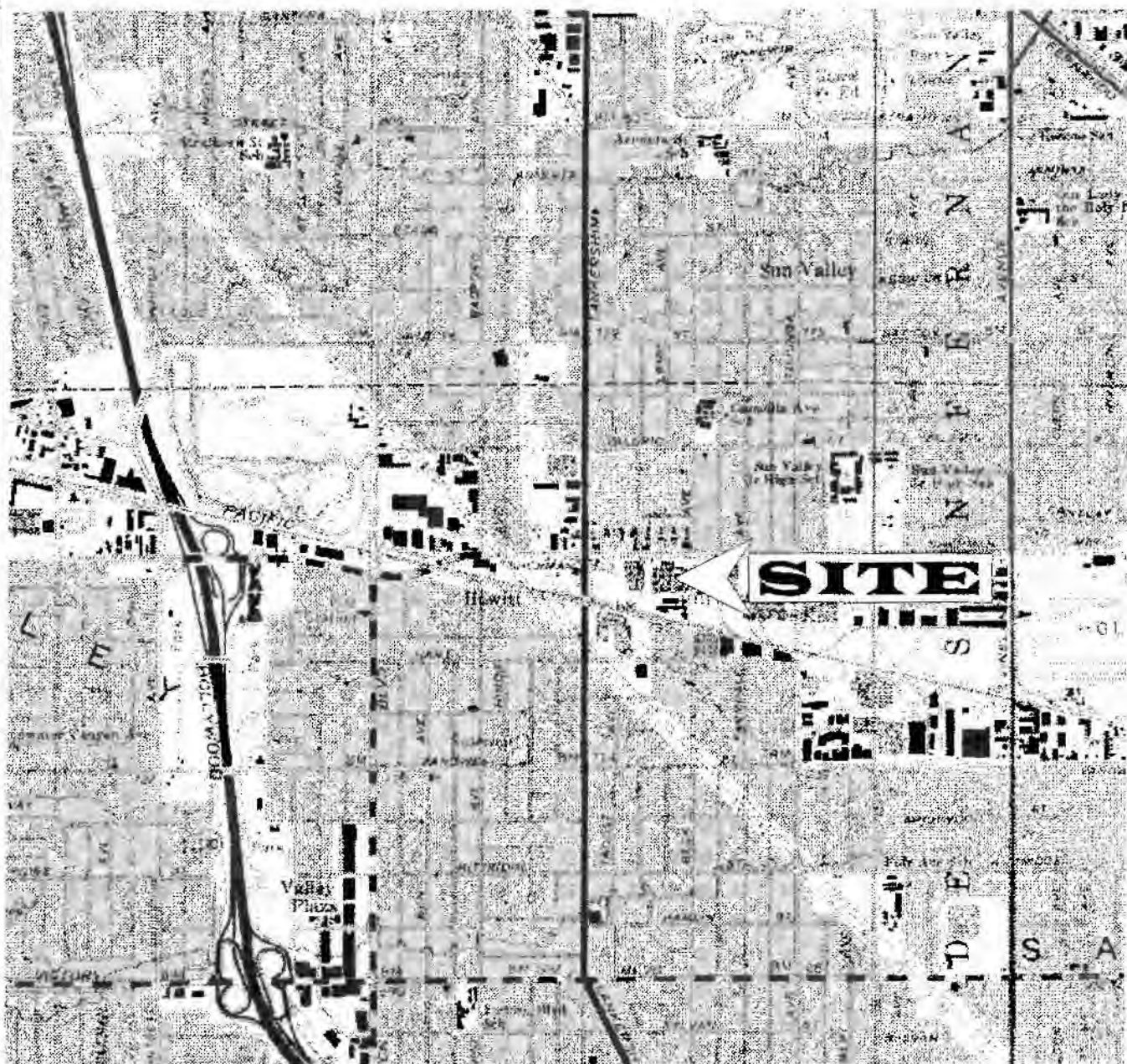
Recommendations

Based on the very low soil gas concentrations detected in the MLGs, it is clear that no remediation is warranted or appropriate on the Eastern Parcel. Any attempt to remediate the existing insignificant soil gas concentrations beneath the Eastern Parcel will enhance the diffusion of VOCs from the groundwater, as well as potentially pull the off-site soil gas plume into the Site. While it is unlikely that soil gas concentrations change dramatically beneath the Eastern Parcel, the possibility of some variation cannot be ruled out, due to the municipal groundwater pumping schedule. Consequently, we recommend that the soil gas concentrations on-site be monitored bimonthly via probes at MLG-2, MLG-3, MLG-4, and MLG-6, at selected depths. Based on the existing soil gas data for the remainder of the Site outside of the Eastern Parcel, which are consistent with the findings from the Eastern Parcel, this bimonthly monitoring is also expected to confirm that the source of the VOCs detected in the soil gas probes in the remainder of the Site is located off-site. This bimonthly monitoring will alert AlliedSignal to any further eastward migration of the off-site soil gas plume onto the western portion of the Site.

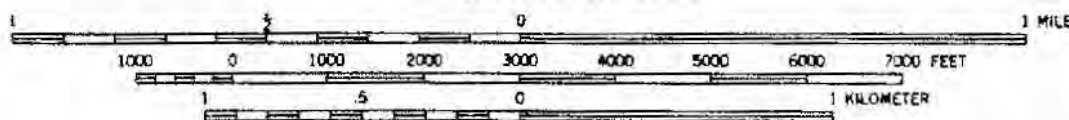
In the event that the off-site gas plume in the vadose zone is observed in bimonthly soil gas monitoring to migrate beneath the Eastern Parcel, it will be possible to control or prevent the movement of the plume from outside the Eastern Parcel boundaries. Hydrologue recommends that all MLGs and groundwater monitoring wells in the Eastern Parcel continue to be maintained at this time. However, we do not recommend any further monitoring in the Eastern Parcel, except bimonthly monitoring of MLG-4.

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FIGURES



SCALE 1:24000



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC SERIES
VAN NUYS AND BURBANK QUADRANGLES

CLIENT

AlliedSignal
AEROSPACE

LOCATION

11600 SHERMAN WAY
NORTH HOLLYWOOD, CALIFORNIA

TITLE

SITE LOCATION MAP

DRAWING
NUMBER

FIGURE

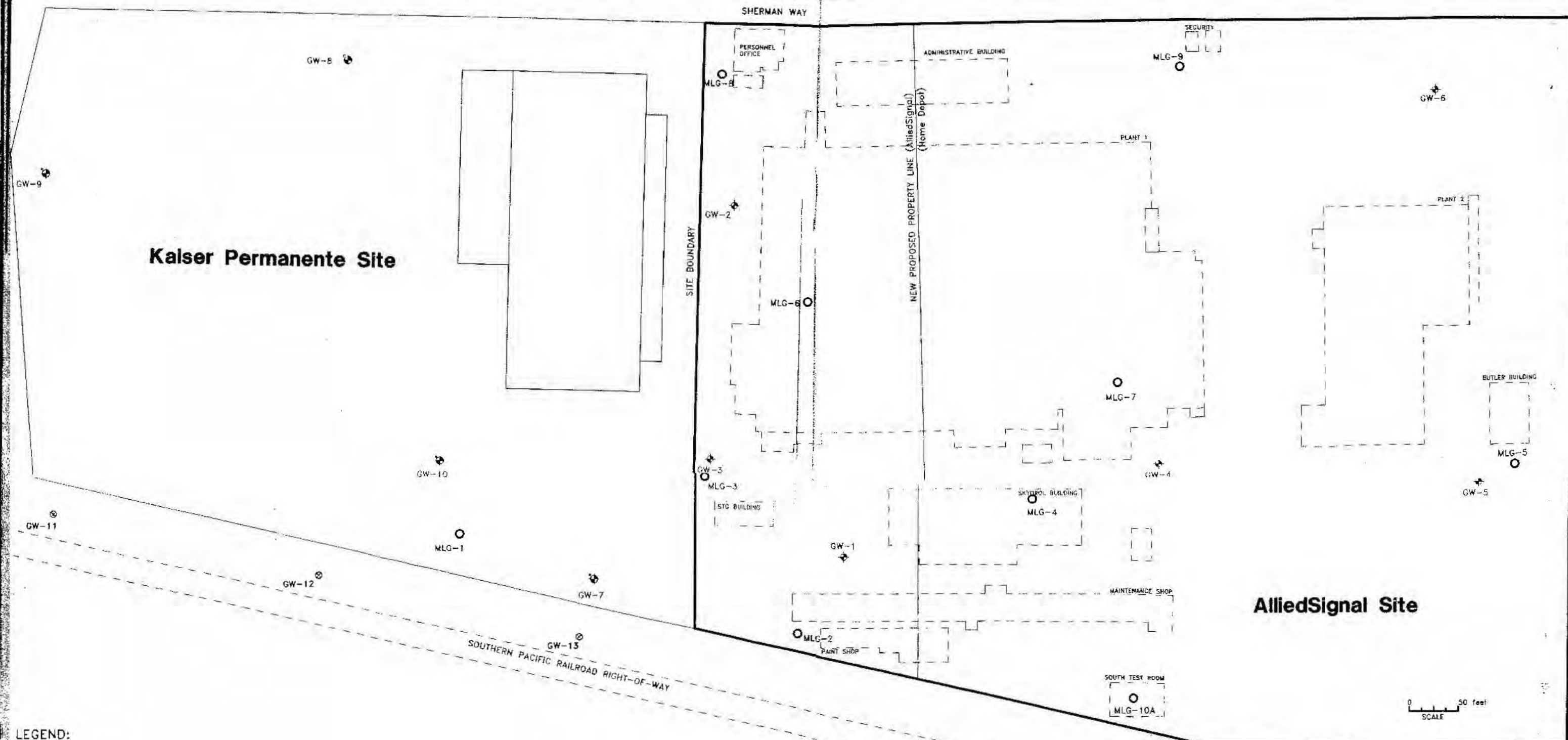
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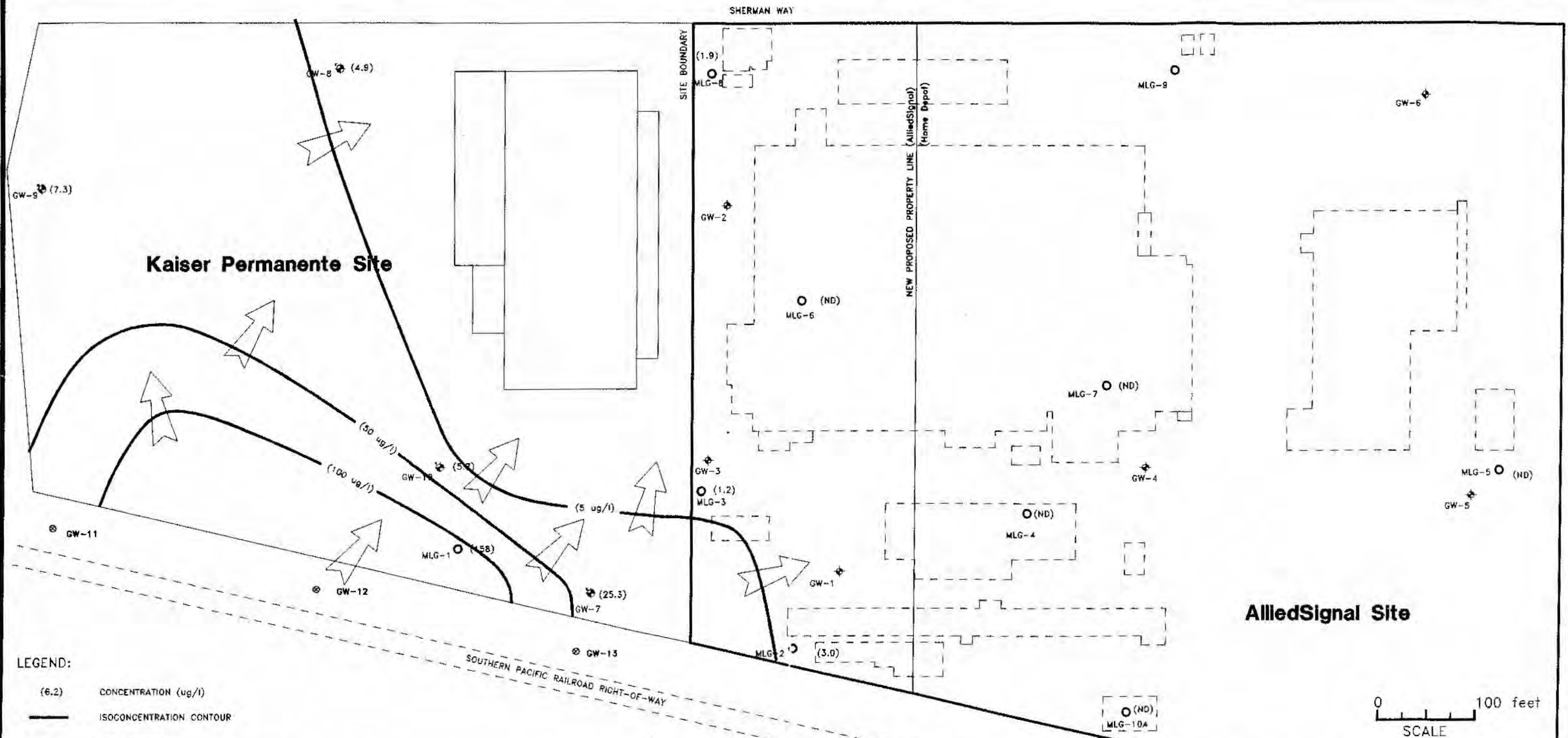
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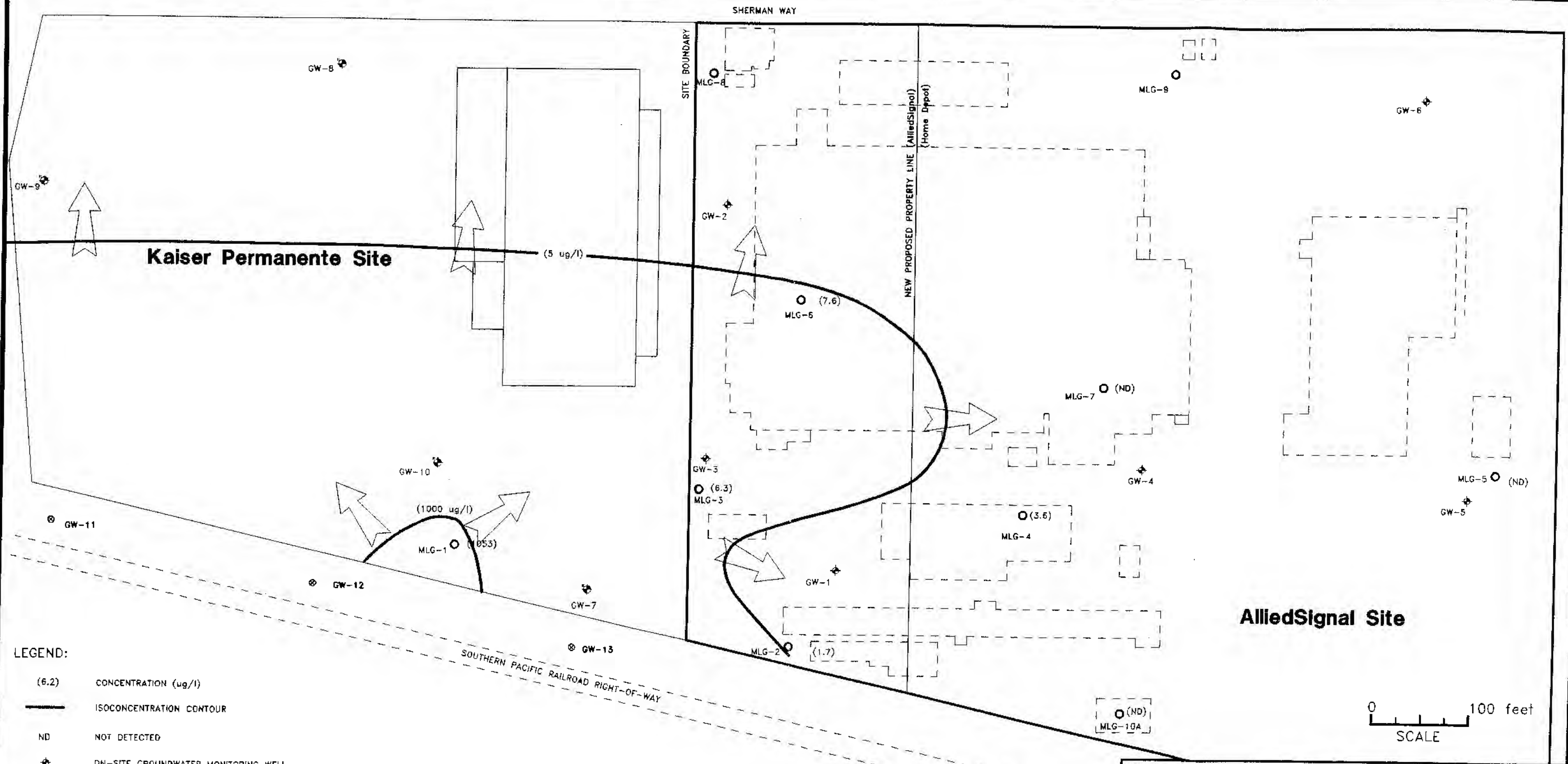
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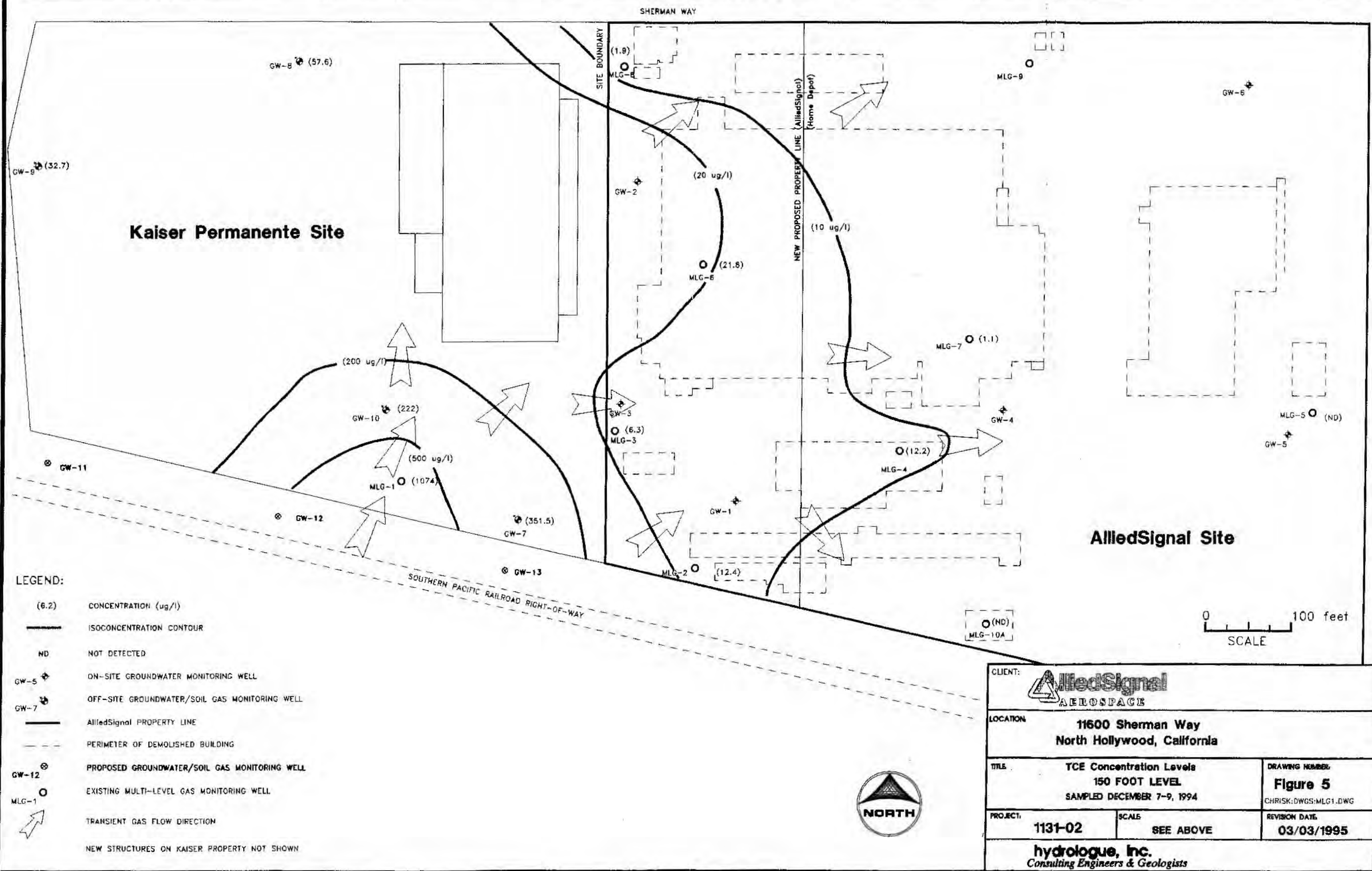
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LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: PROPOSED GROUNDWATER MONITORING WELLS AND EXISTING MULTI-LEVEL GAS PROBE LOCATIONS	DRAWING NUMBER: Figure 2 CHRISK:113102-2.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
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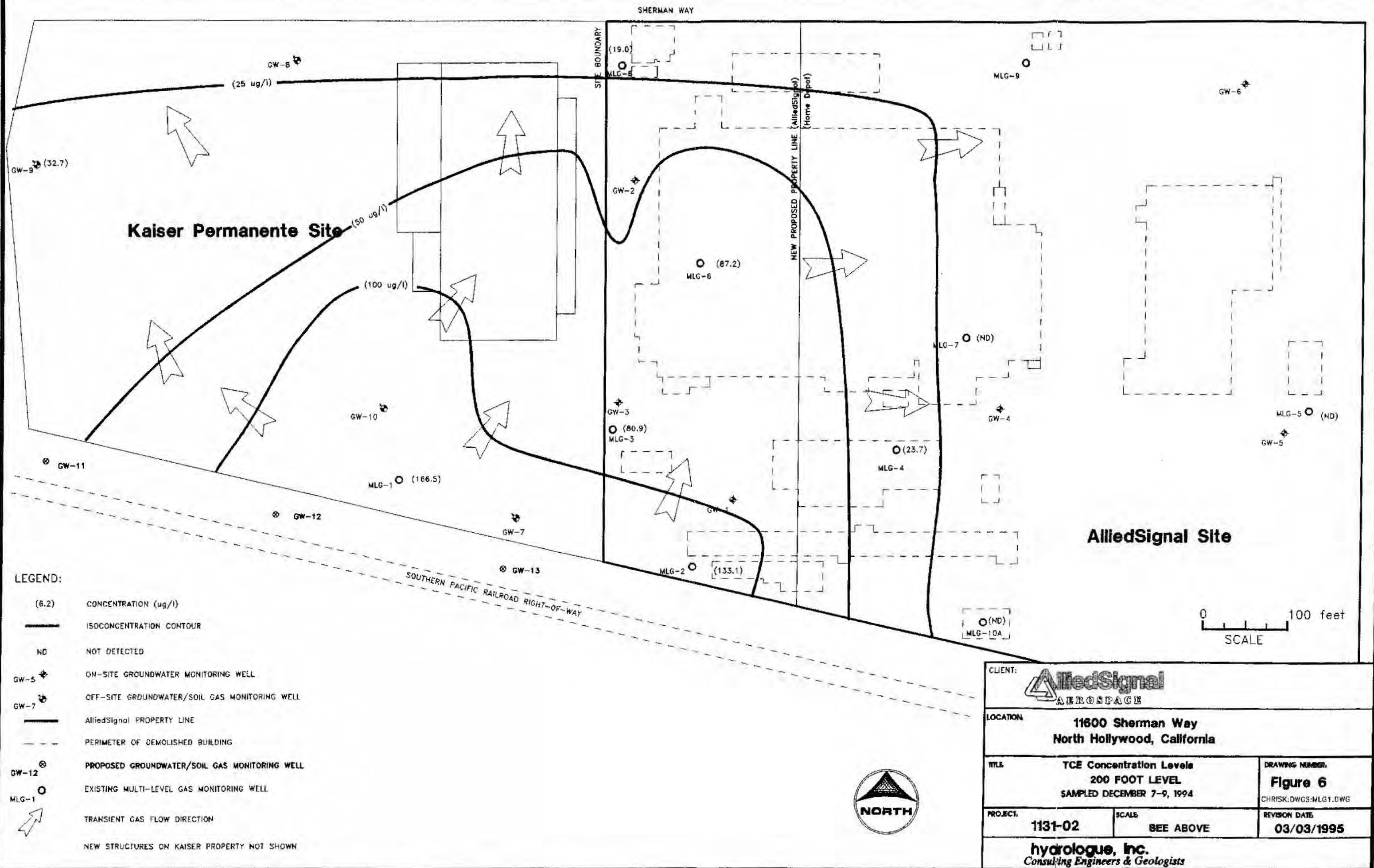
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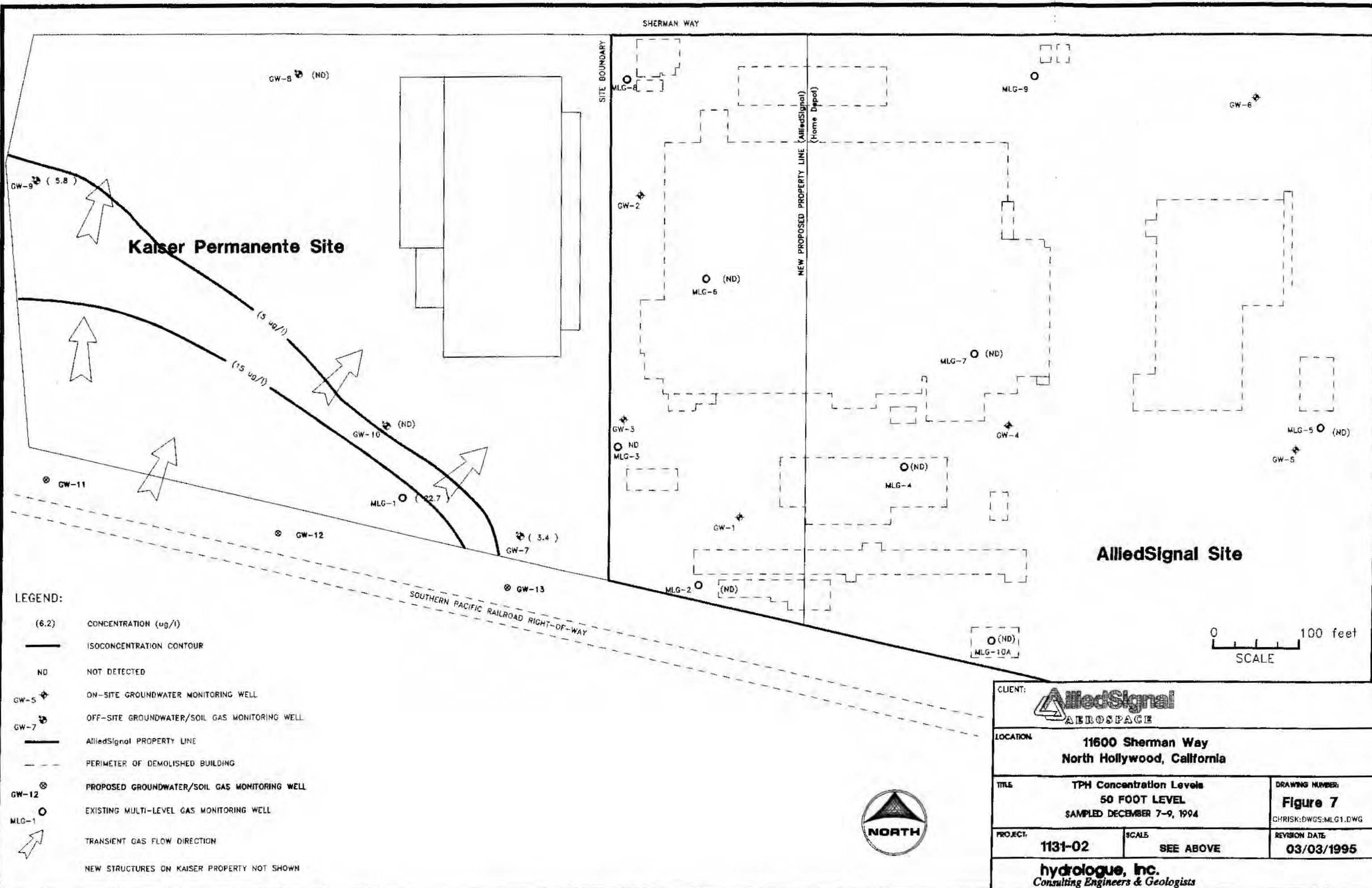


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LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TCE Concentration Levels 100 FOOT LEVEL SAMPLED DECEMBER 7-9, 1994	DRAWING NUMBER: Figure 4 CHRISK:DWGS:MLG1.DWG	
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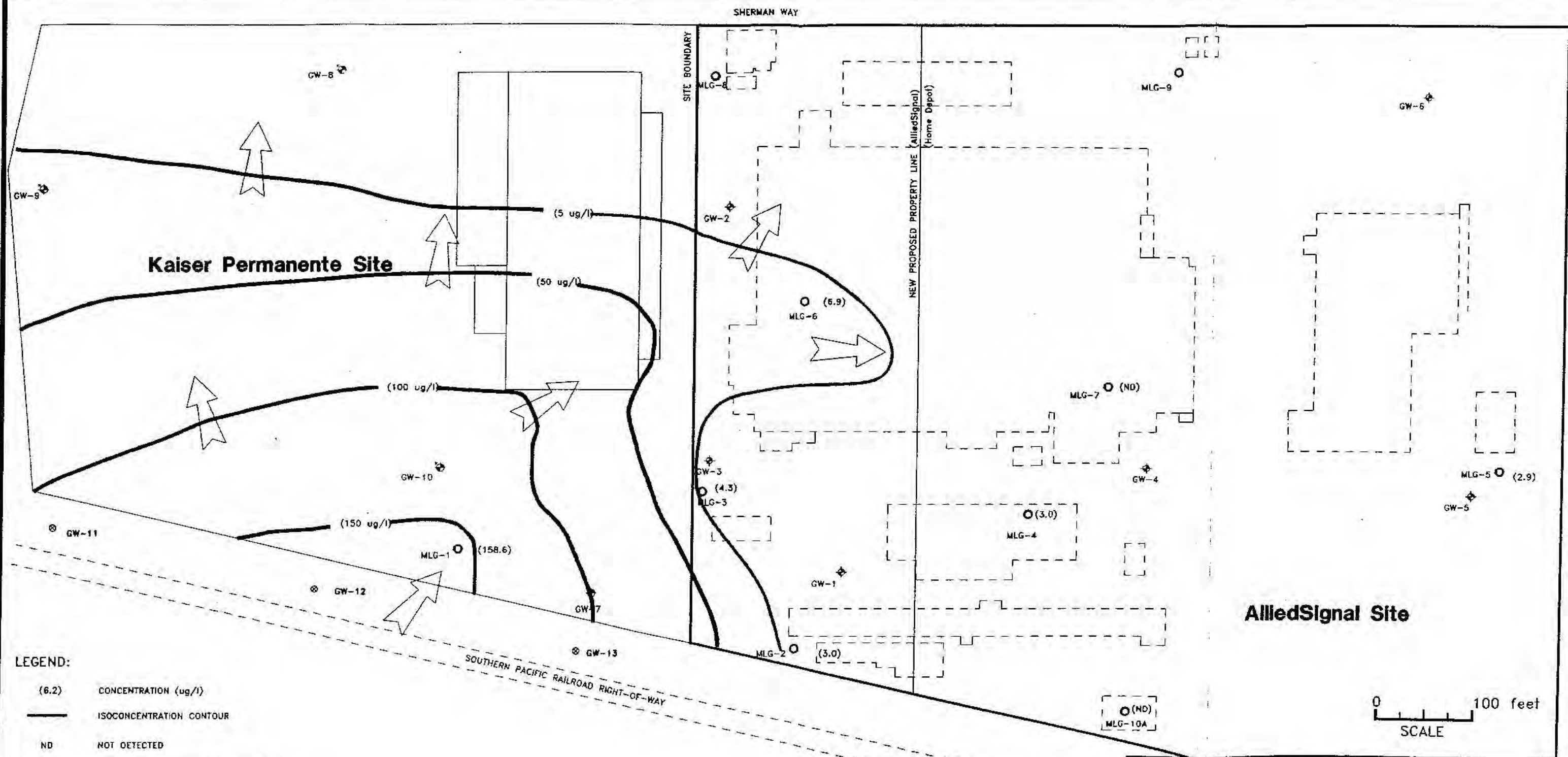
LEGEND:

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- ISOCONCENTRATION CONTOUR
- ND NOT DETECTED
- GW-5 ON-SITE GROUNDWATER MONITORING WELL
- GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
- ALLIEDSIGNAL PROPERTY LINE
- - - PERIMETER OF DEMOLISHED BUILDING
- ⊗ PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
- EXISTING MULTI-LEVEL GAS MONITORING WELL
- ↗ TRANSIENT GAS FLOW DIRECTION
- NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN

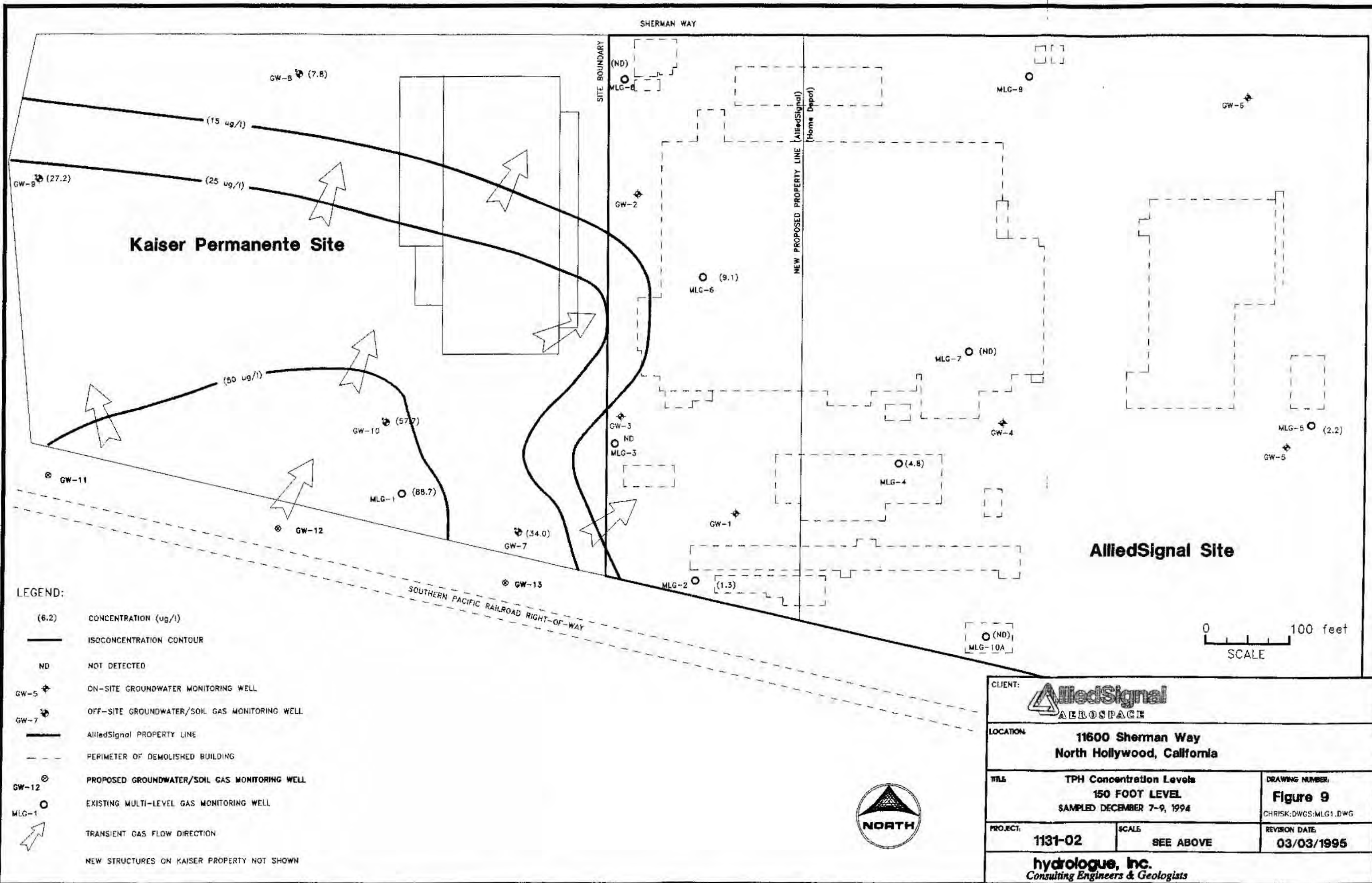


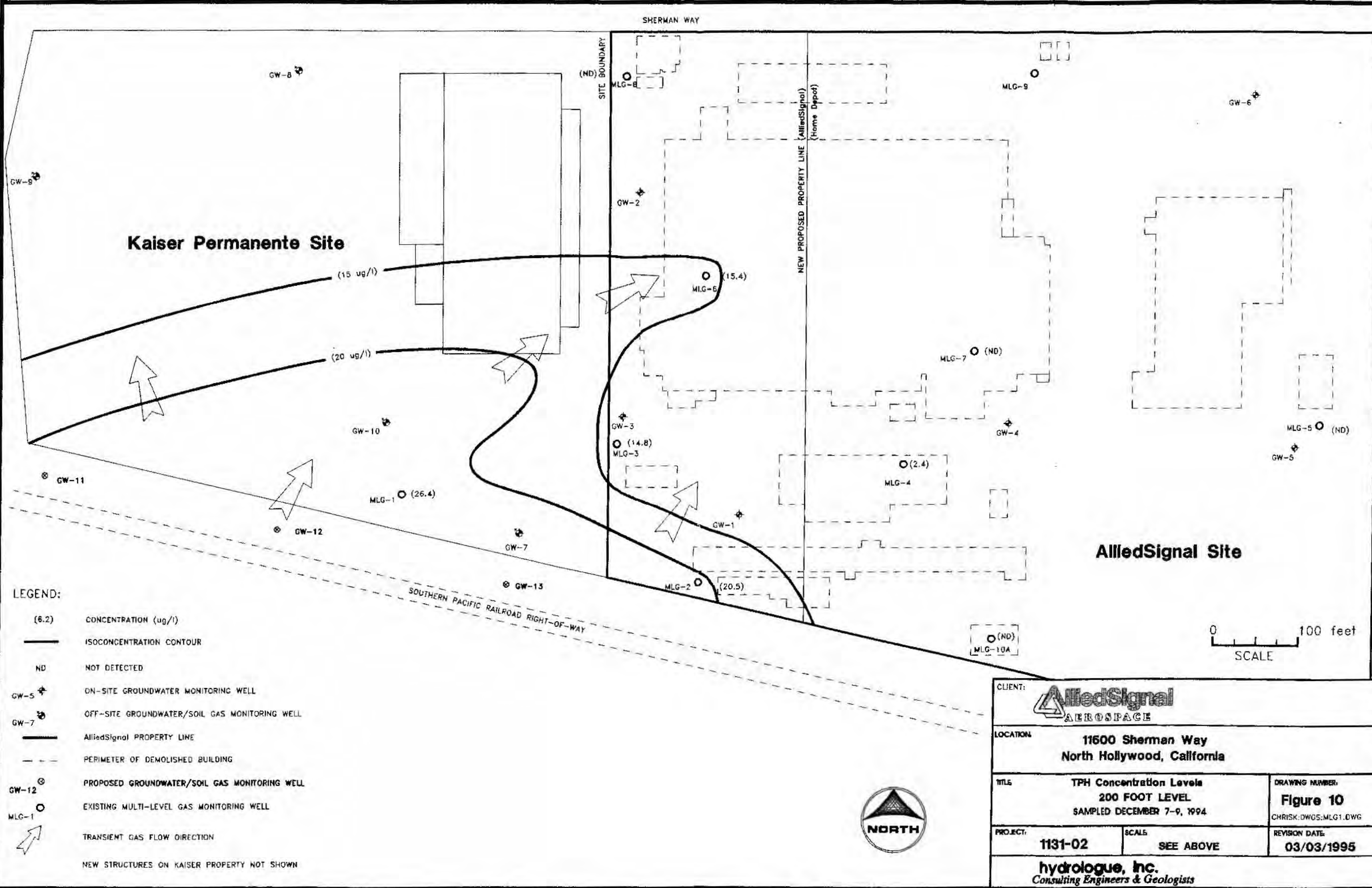
0 100 feet
SCALE

CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 50 FOOT LEVEL SAMPLED DECEMBER 7-9, 1994	DRAWING NUMBER: Figure 7 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		

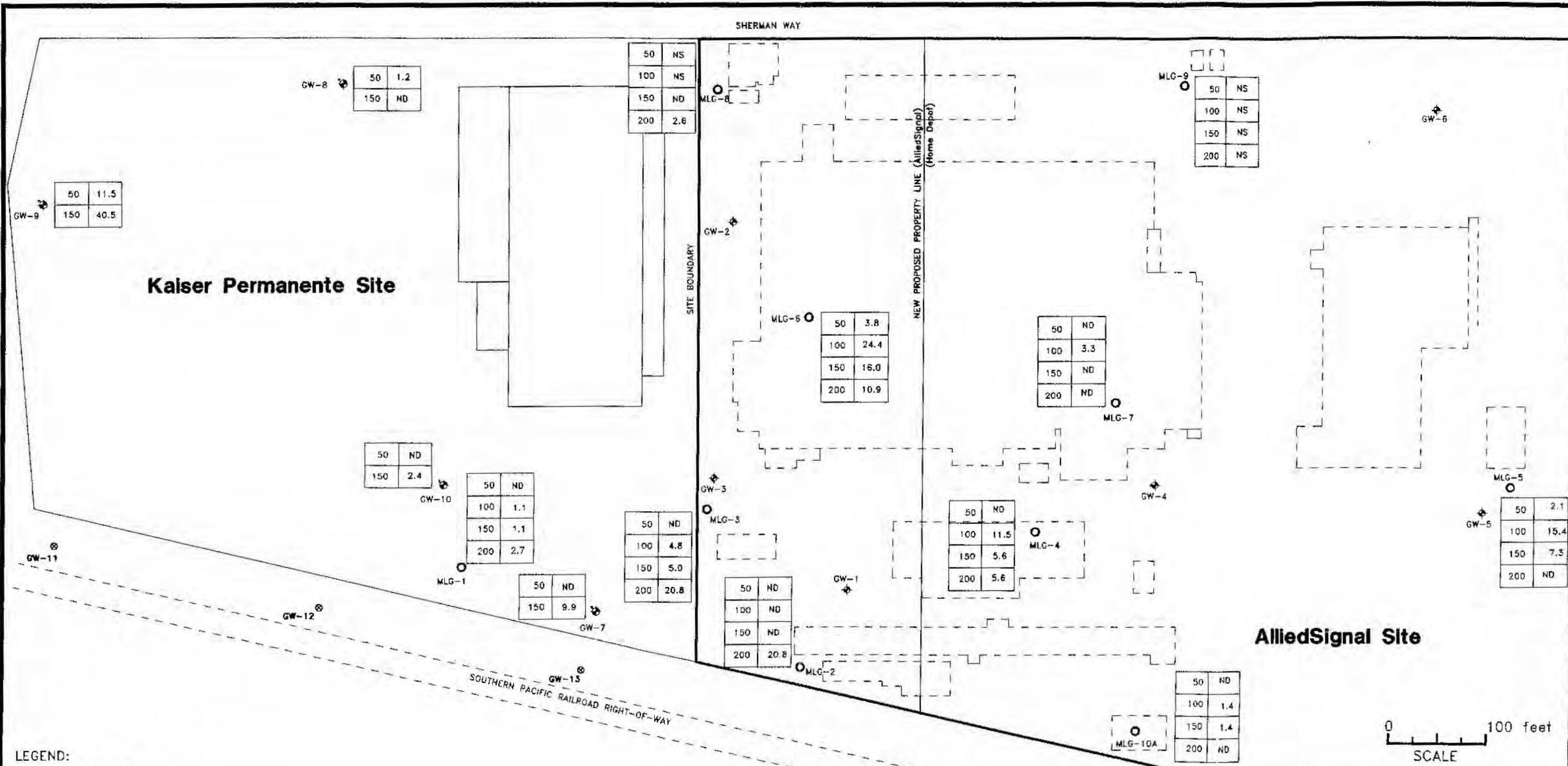


CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 100 FOOT LEVEL SAMPLED DECEMBER 7-9, 1994	DRAWING NUMBER: Figure 8 CHRISK.DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		

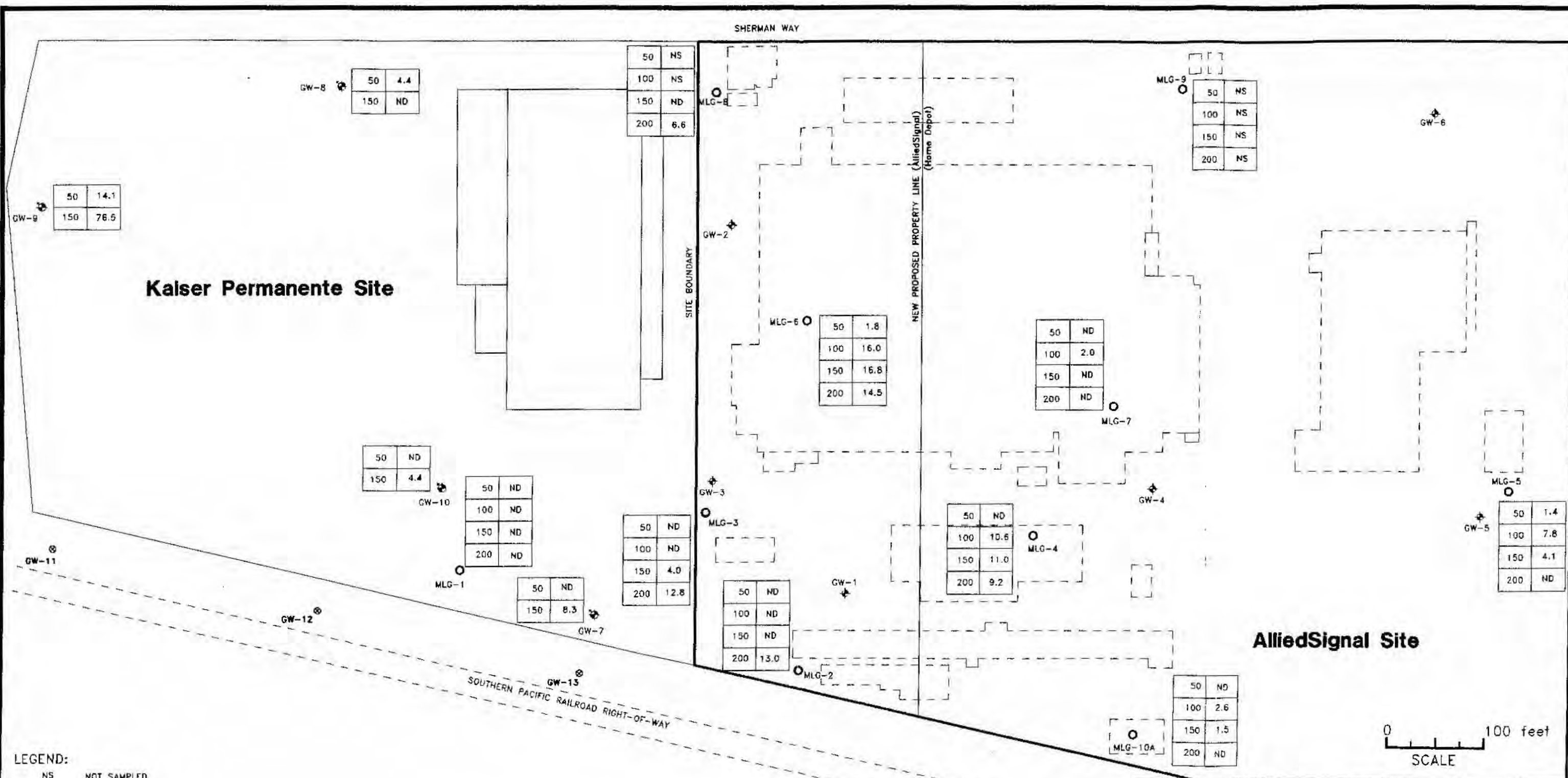




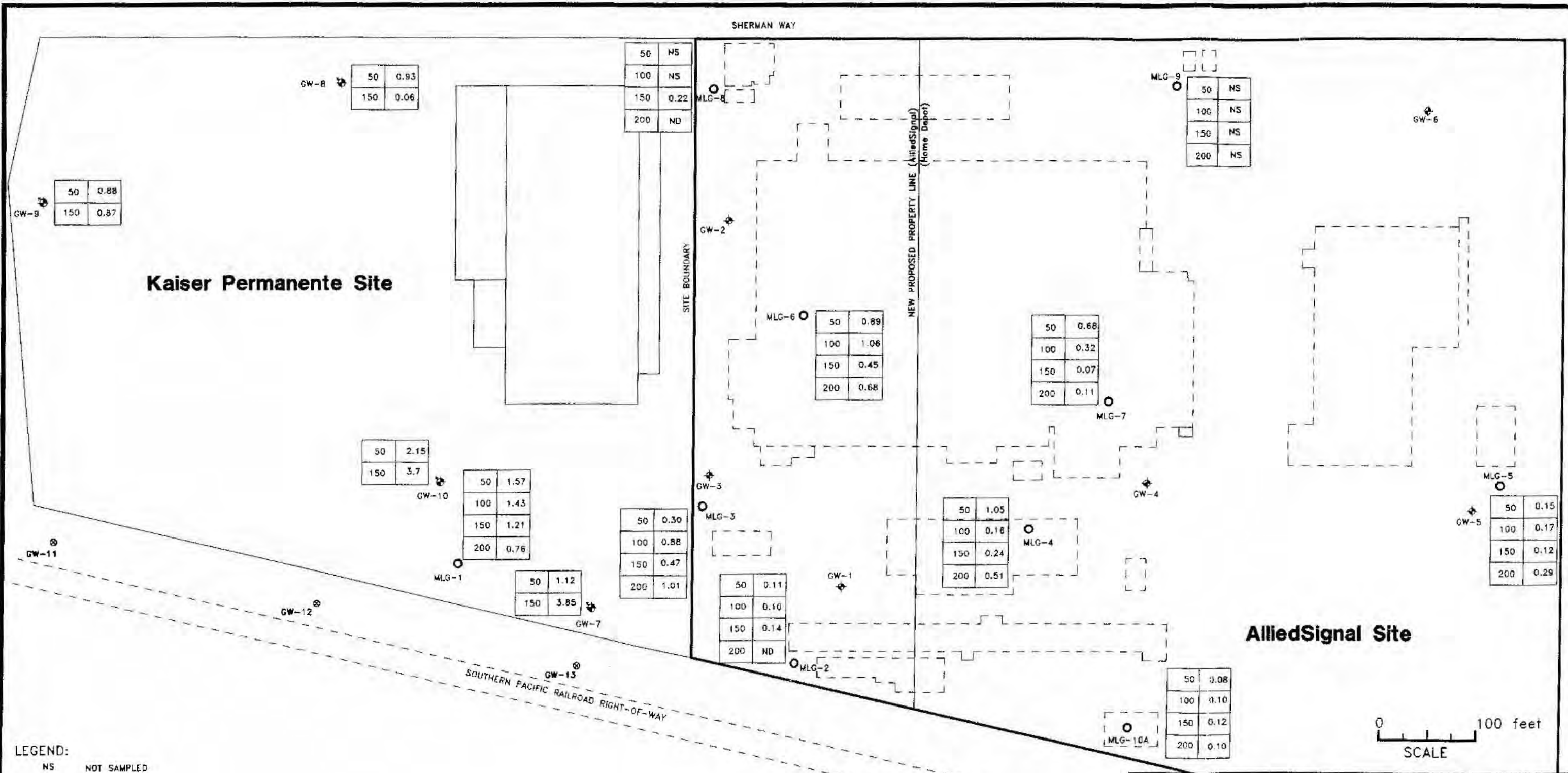
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 200 FOOT LEVEL SAMPLED DECEMBER 7-9, 1994	DRAWING NUMBER: Figure 10 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



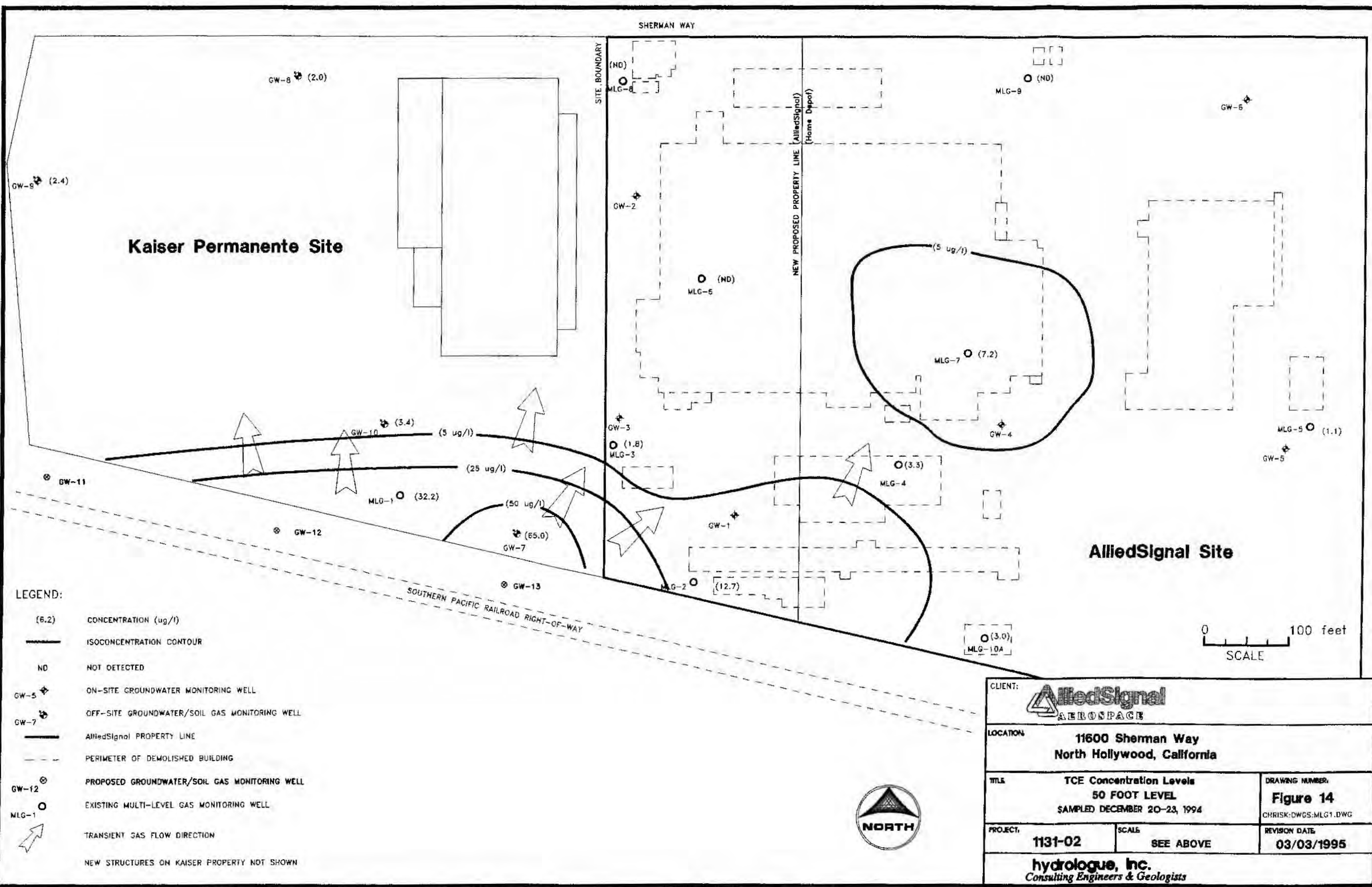
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: 1,1-TCA CONCENTRATION LEVELS SAMPLED DECEMBER 7-9, 1994		DRAWING NUMBER: Figure 11
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		

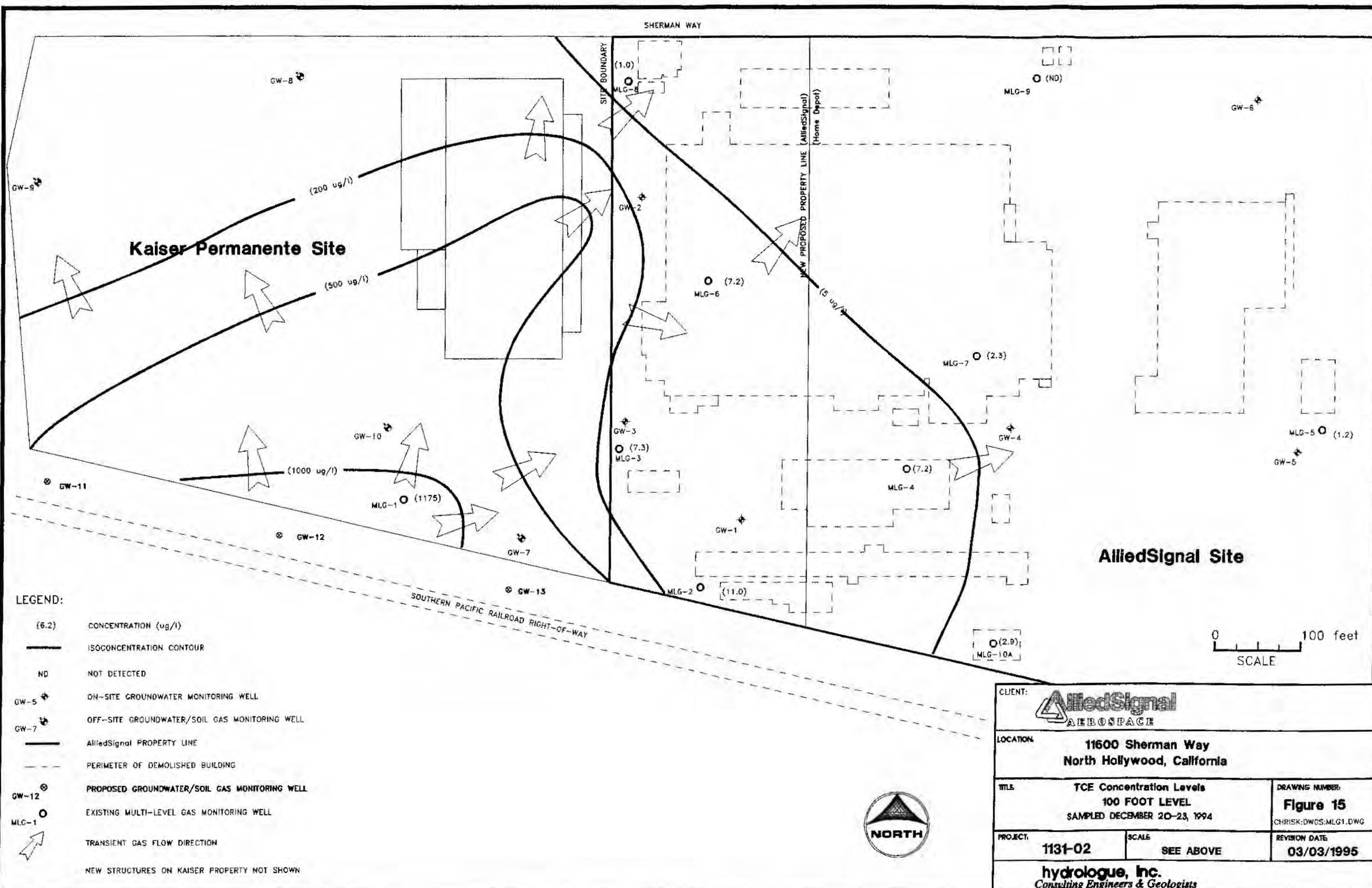


CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: 1,1-DCE CONCENTRATION LEVELS SAMPLED DECEMBER 7-8, 1994		DRAWING NUMBER: Figure 12
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: CO2 CONCENTRATION LEVELS SAMPLED DECEMBER 7-9, 1994		DRAWING NUMBER: Figure 13
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		

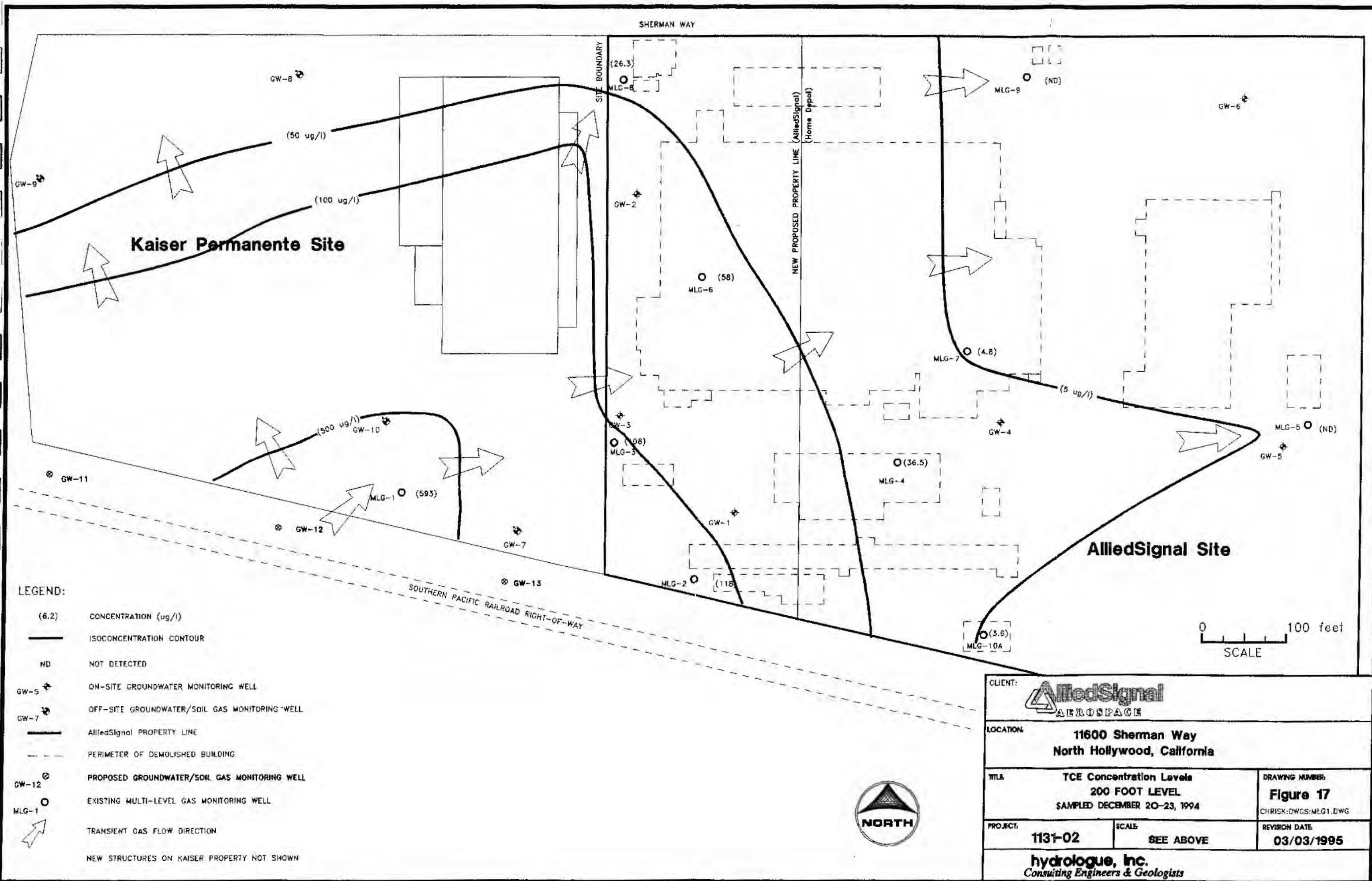




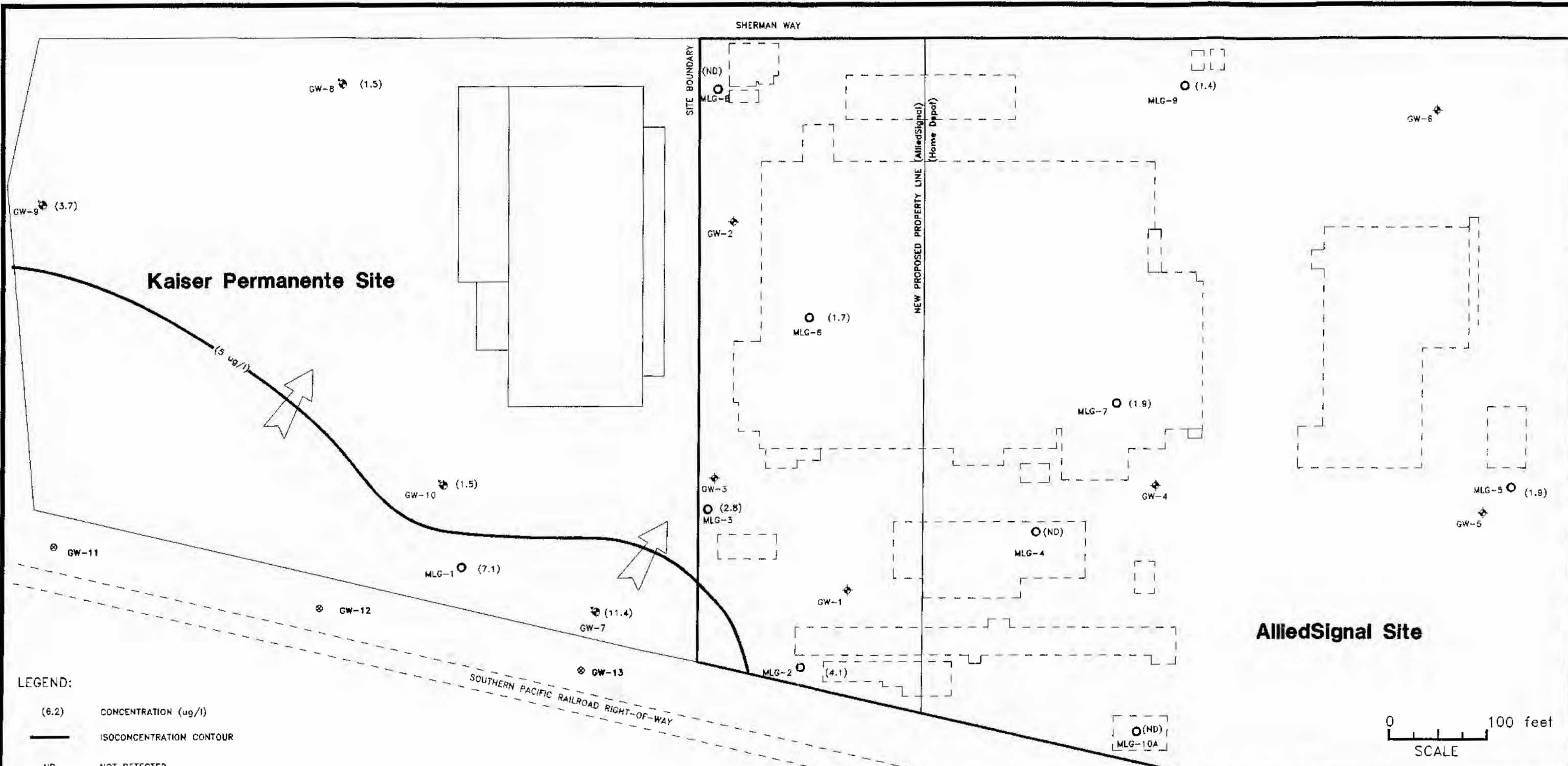
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TCE Concentration Levels 100 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 15 CHRISK:DWCS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



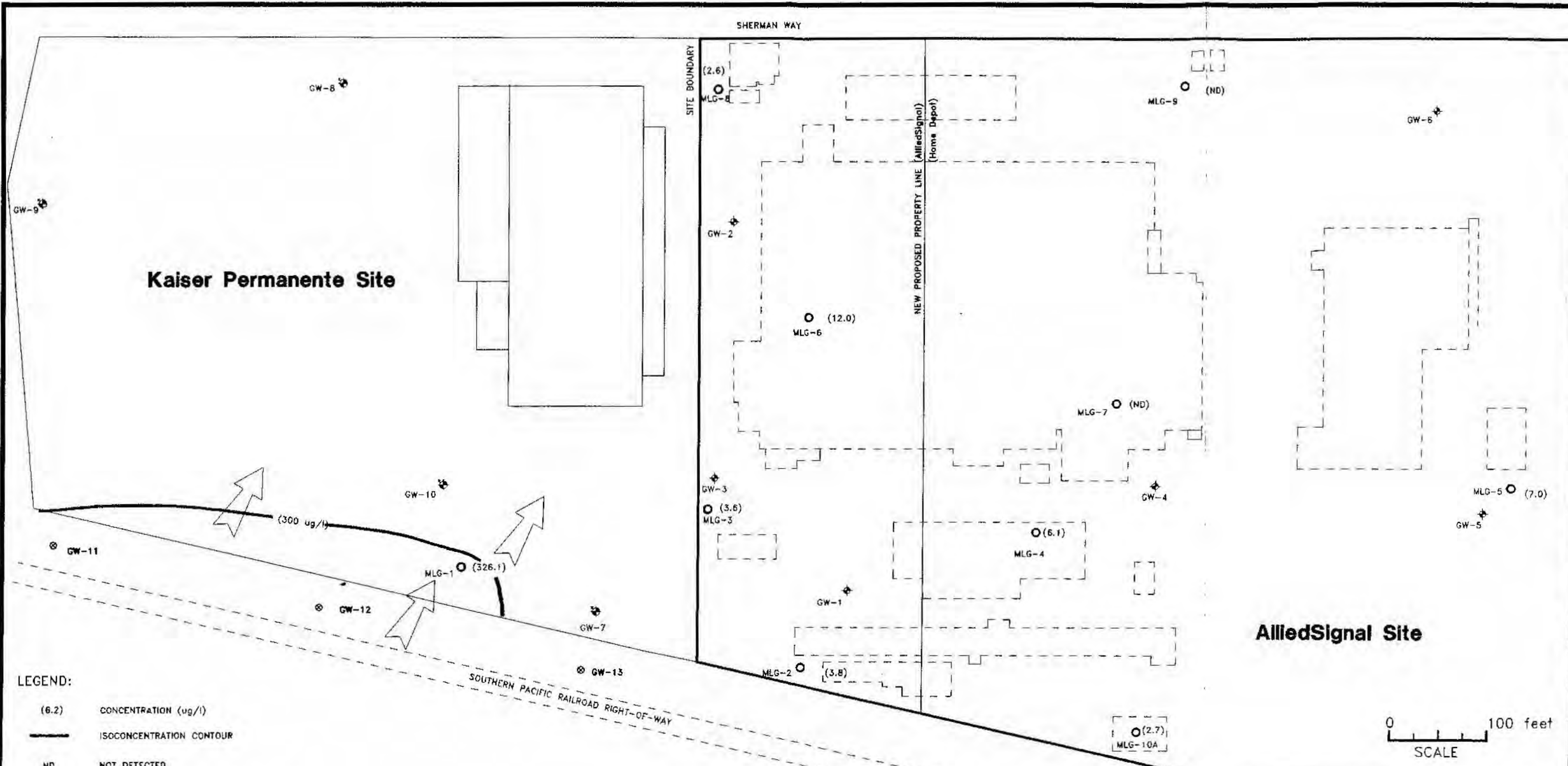
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TCE Concentration Levels 150 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 16 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



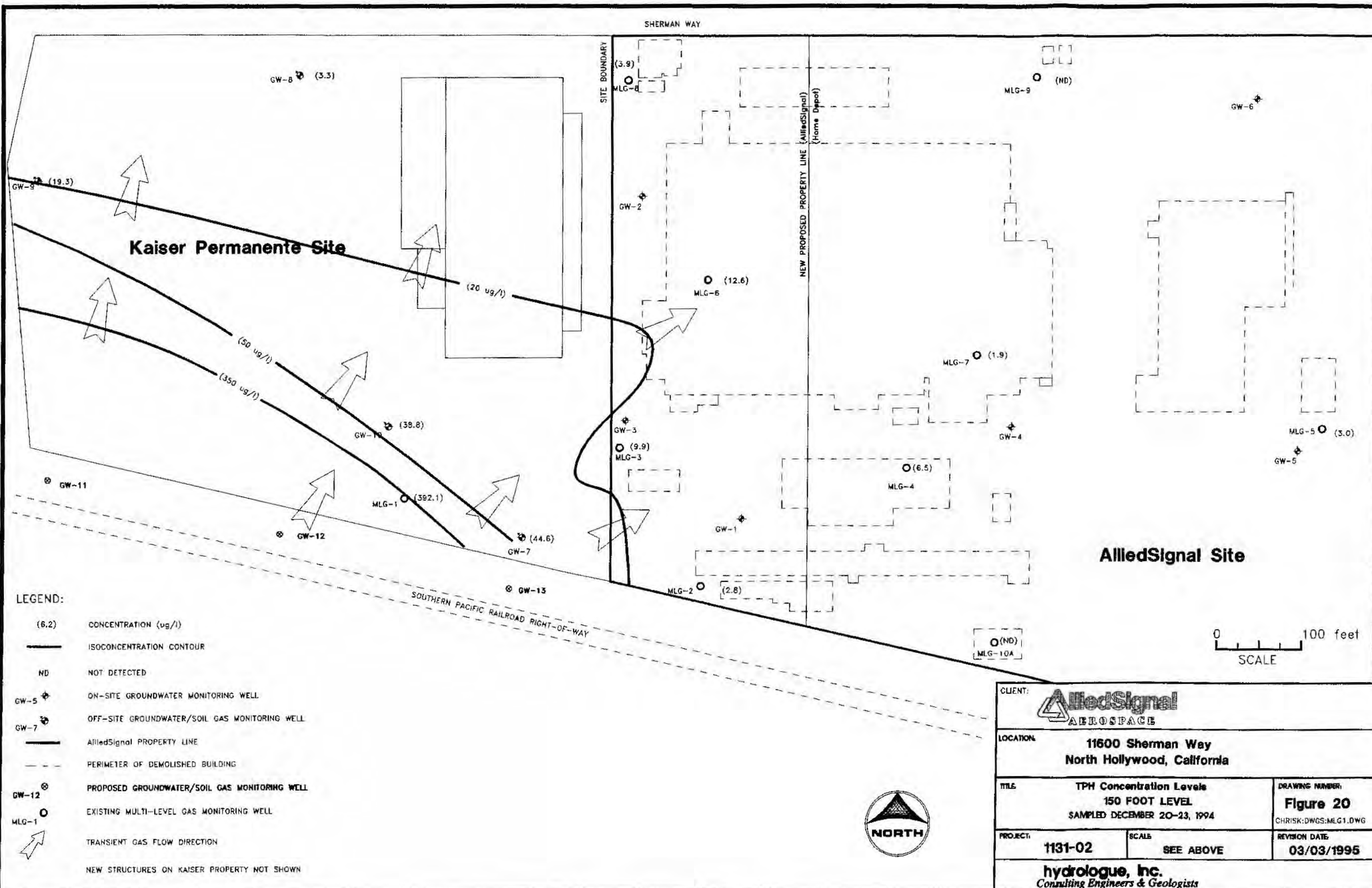
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TCE Concentration Levels 200 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 17 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 50 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 18 CHRISK:DWCS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 100 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 19 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



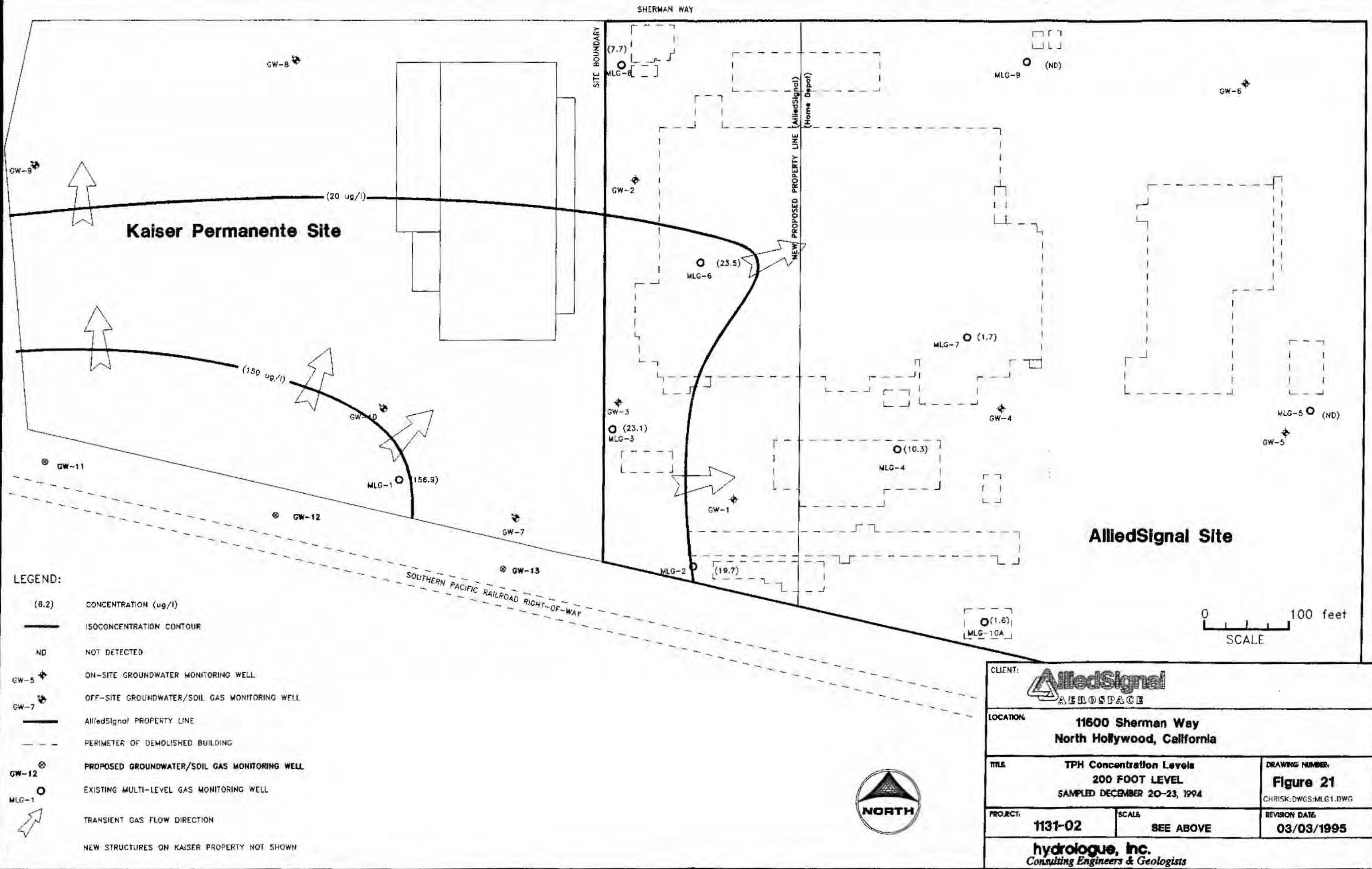
LEGEND:

- (6.2) CONCENTRATION (ug/l)
- ISOCONCENTRATION CONTOUR
- ND NOT DETECTED
- GW-5 ON-SITE GROUNDWATER MONITORING WELL
- GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
- ALLIEDSIGNAL PROPERTY LINE
- - - PERIMETER OF DEMOLISHED BUILDING
- GW-12 PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
- MLG-1 EXISTING MULTI-LEVEL GAS MONITORING WELL
- ↗ TRANSIENT GAS FLOW DIRECTION
- NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN

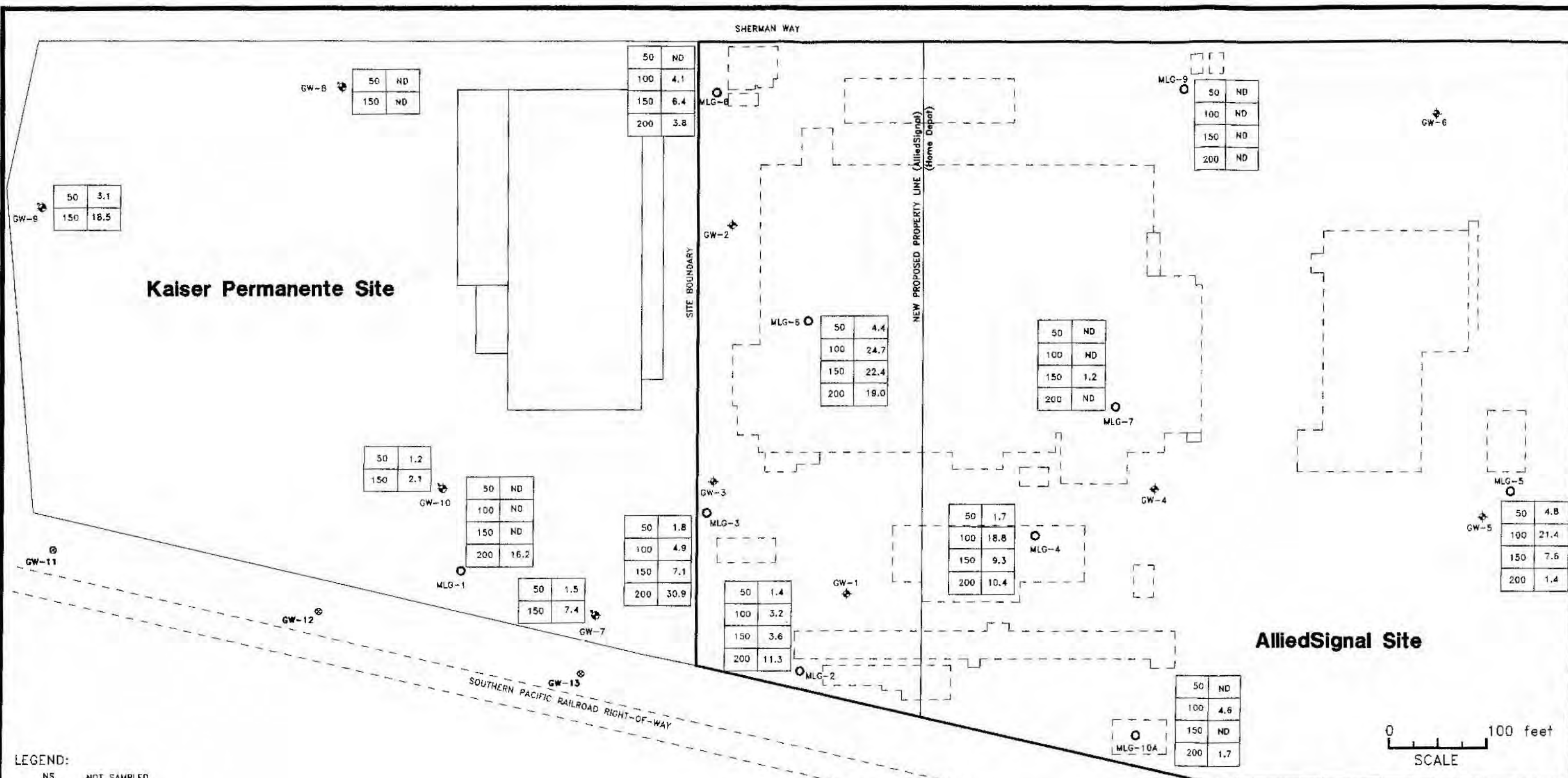


0 100 feet
SCALE

CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 150 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 20 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 200 FOOT LEVEL SAMPLED DECEMBER 20-23, 1994	DRAWING NUMBER: Figure 21 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



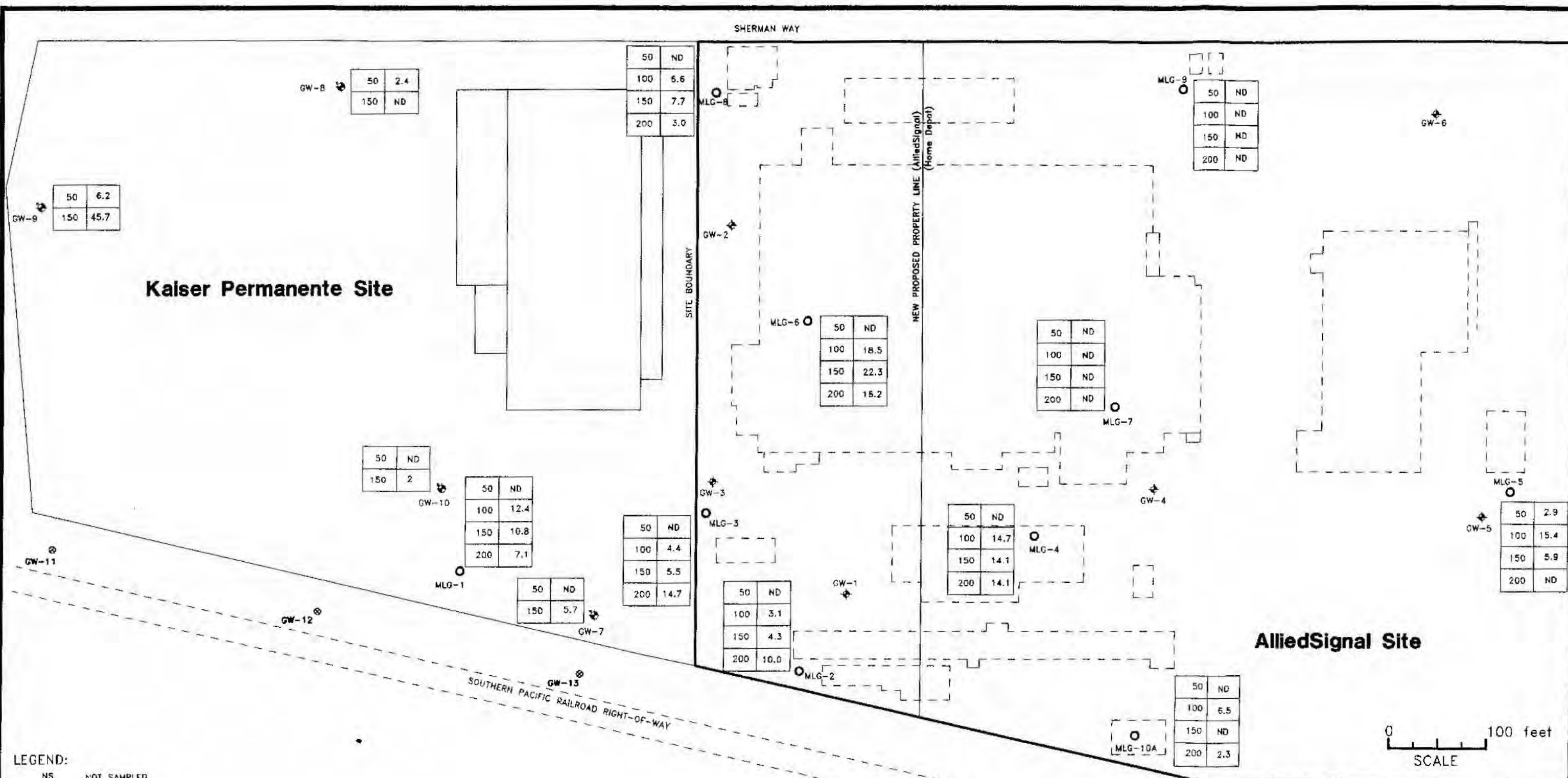
- LEGEND:
- NS NOT SAMPLED
 - ND NOT DETECTED
 - GW-5 ON-SITE GROUNDWATER MONITORING WELL
 - GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
 - AlliedSignal PROPERTY LINE
 - - - PERIMETER OF DEMOLISHED BUILDING
 - GW-12 PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
 - MLG-1 EXISTING MULTI-LEVEL GAS MONITORING WELL
 - NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN

TYPICAL MLC DATA

DEPTH (ft. bgs)	CONCENTRATION (ug/l)
50	1.1
100	ND



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: 1,1-TCA CONCENTRATION LEVELS SAMPLED DECEMBER 20-23, 1994		DRAWING NUMBER: Figure 22
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



LEGEND:

- NS NOT SAMPLED
- ND NOT DETECTED
- GW-5 ON-SITE GROUNDWATER MONITORING WELL
- GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
- AlliedSignal PROPERTY LINE
- - - PERIMETER OF DEMOLISHED BUILDING
- GW-12 PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
- MLG-1 EXISTING MULTI-LEVEL GAS MONITORING WELL
- NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN

TYPICAL MLG DATA

DEPTH (ft. bgs)	CONCENTRATION (ug/l)
50	1.1
100	ND



CLIENT:



LOCATION:

**11600 Sherman Way
North Hollywood, California**

TITLE:

**1,1-DCE CONCENTRATION LEVELS
SAMPLED DECEMBER 20-23, 1994**

DRAWING NUMBER:

Figure 23

PROJECT:

1131-02

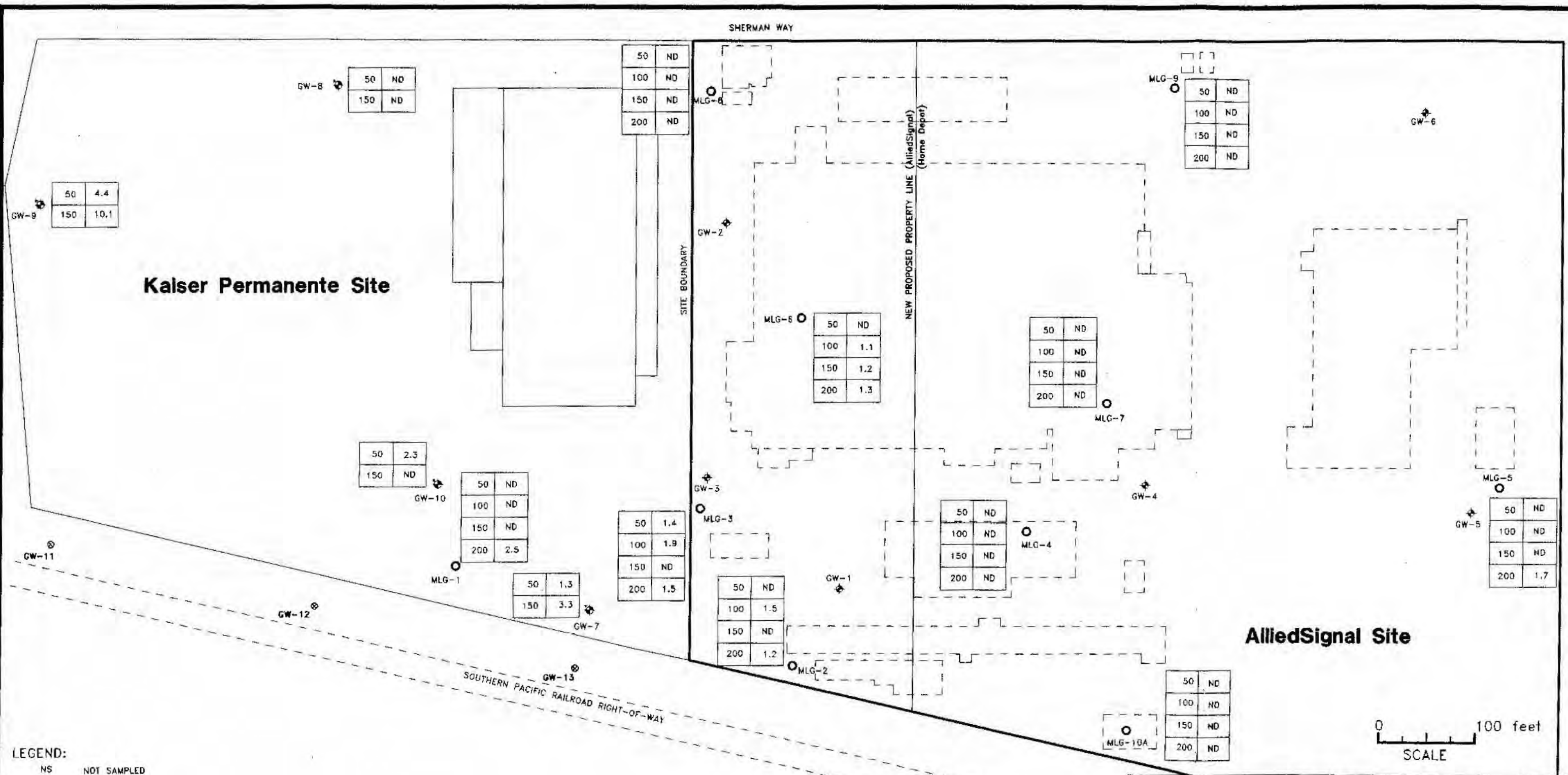
SCALE:

SEE ABOVE

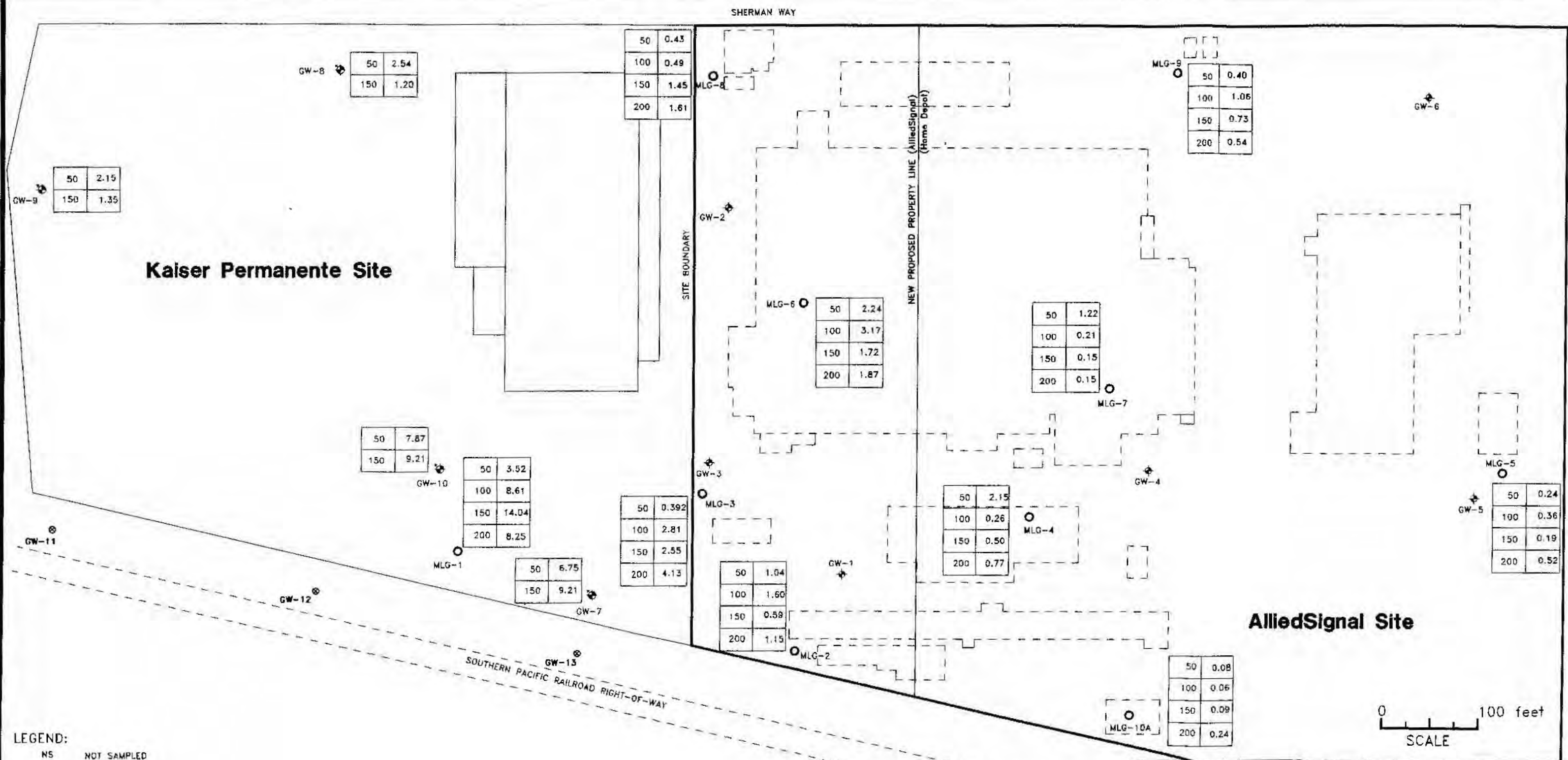
REVISION DATE:

03/03/1995

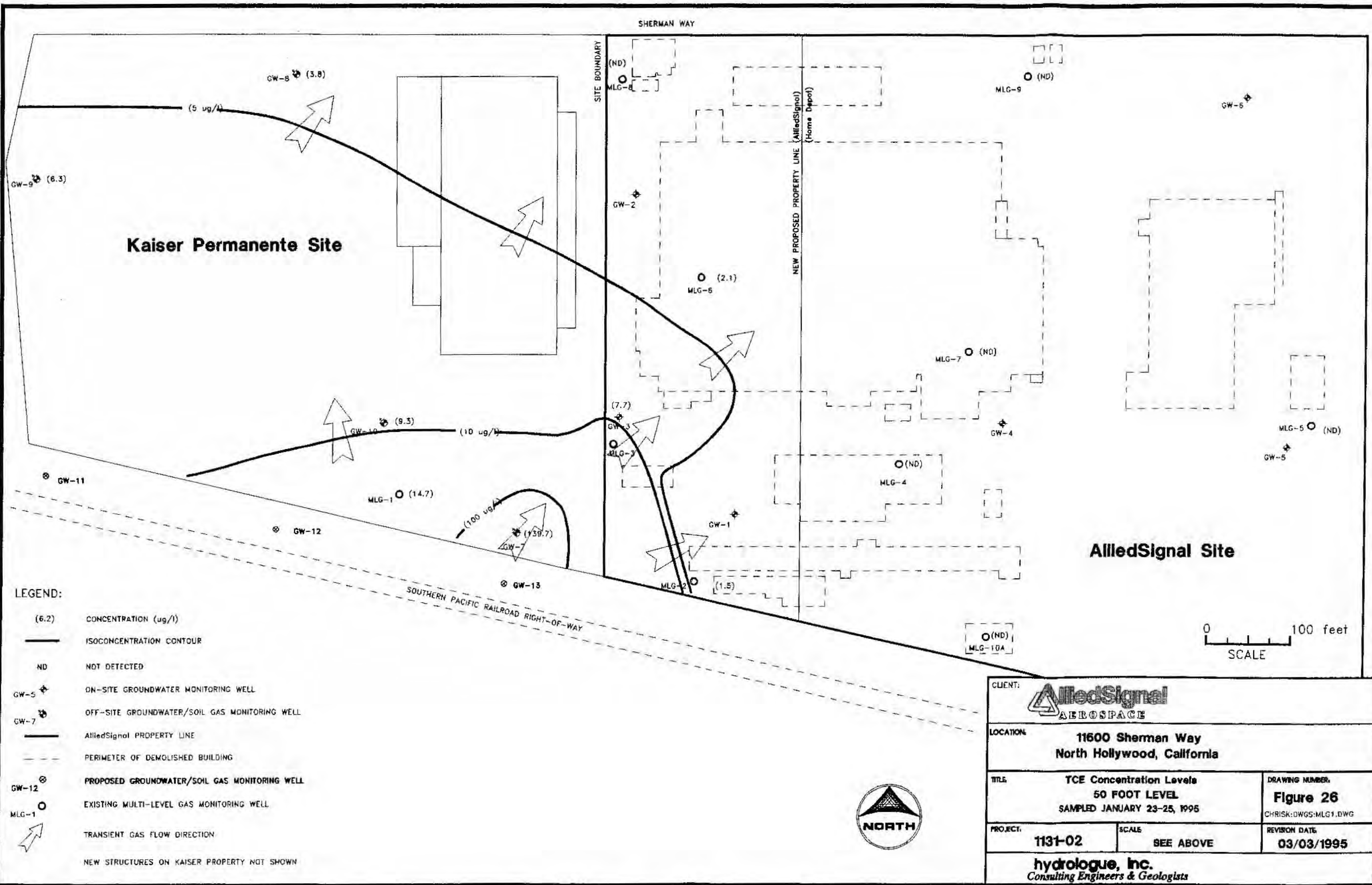
hydrologue, Inc.
Consulting Engineers & Geologists

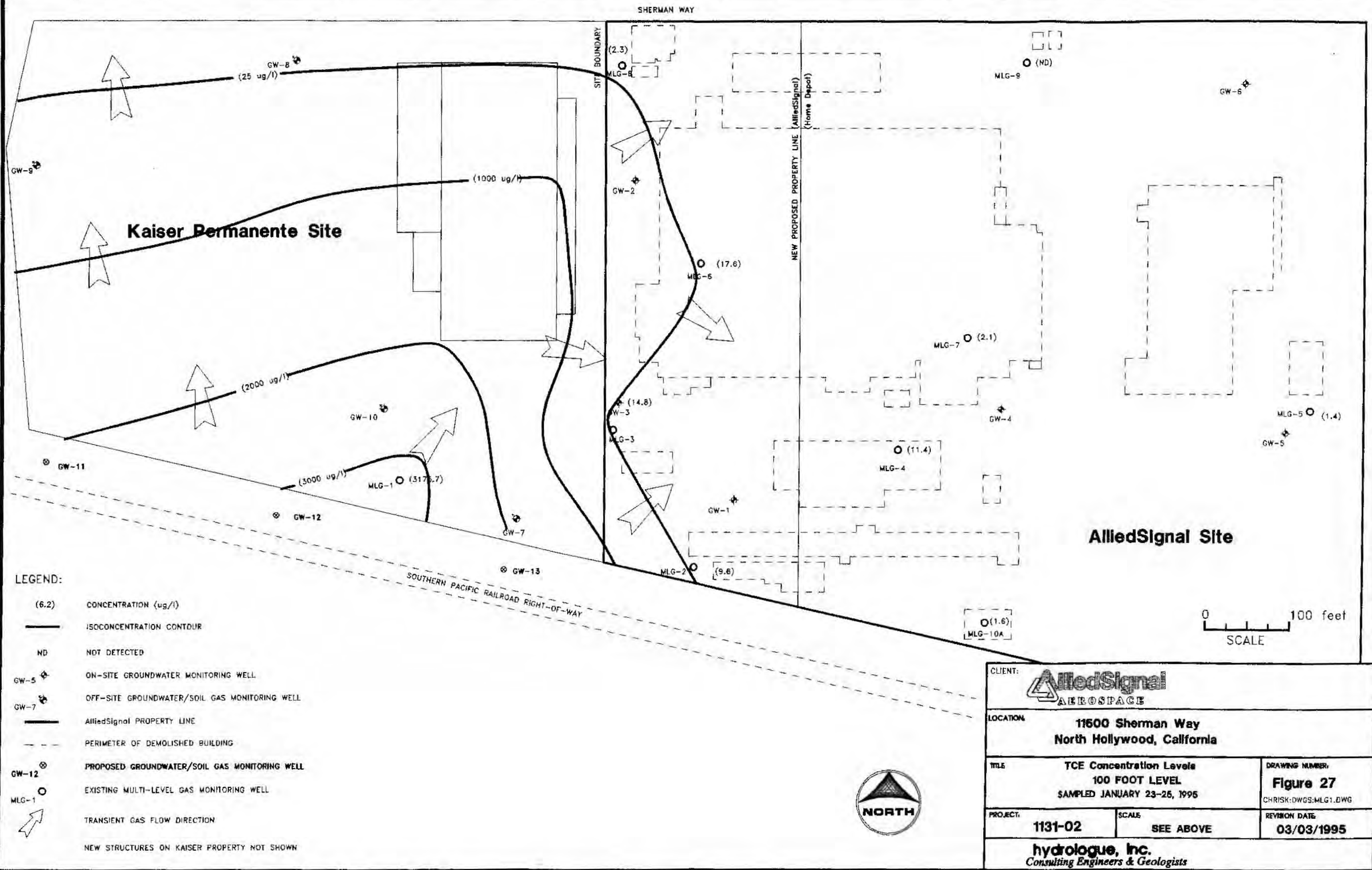


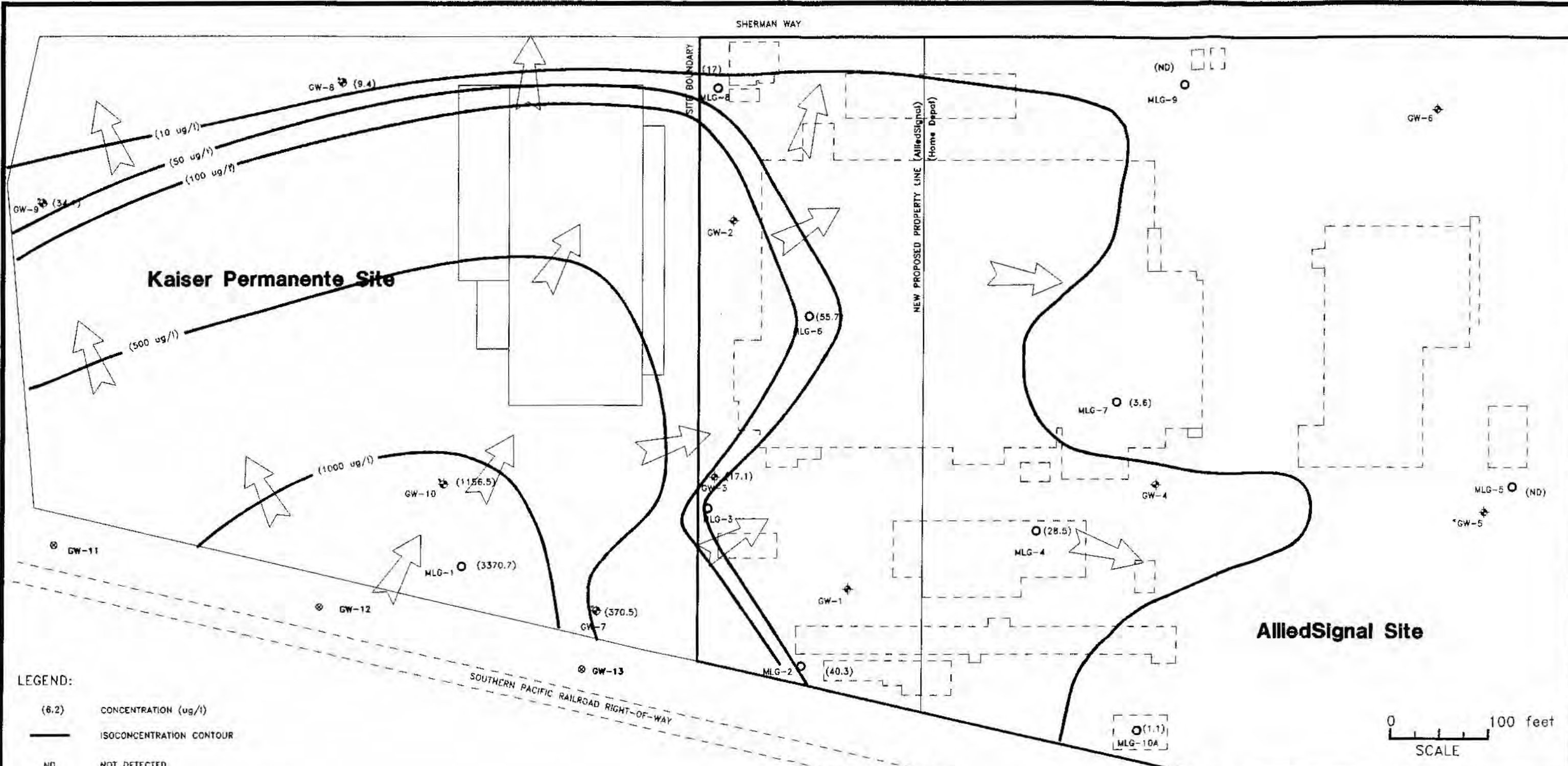
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: PCE CONCENTRATION LEVELS SAMPLED DECEMBER 20-28, 1994		DRAWING NUMBER: Figure 24
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



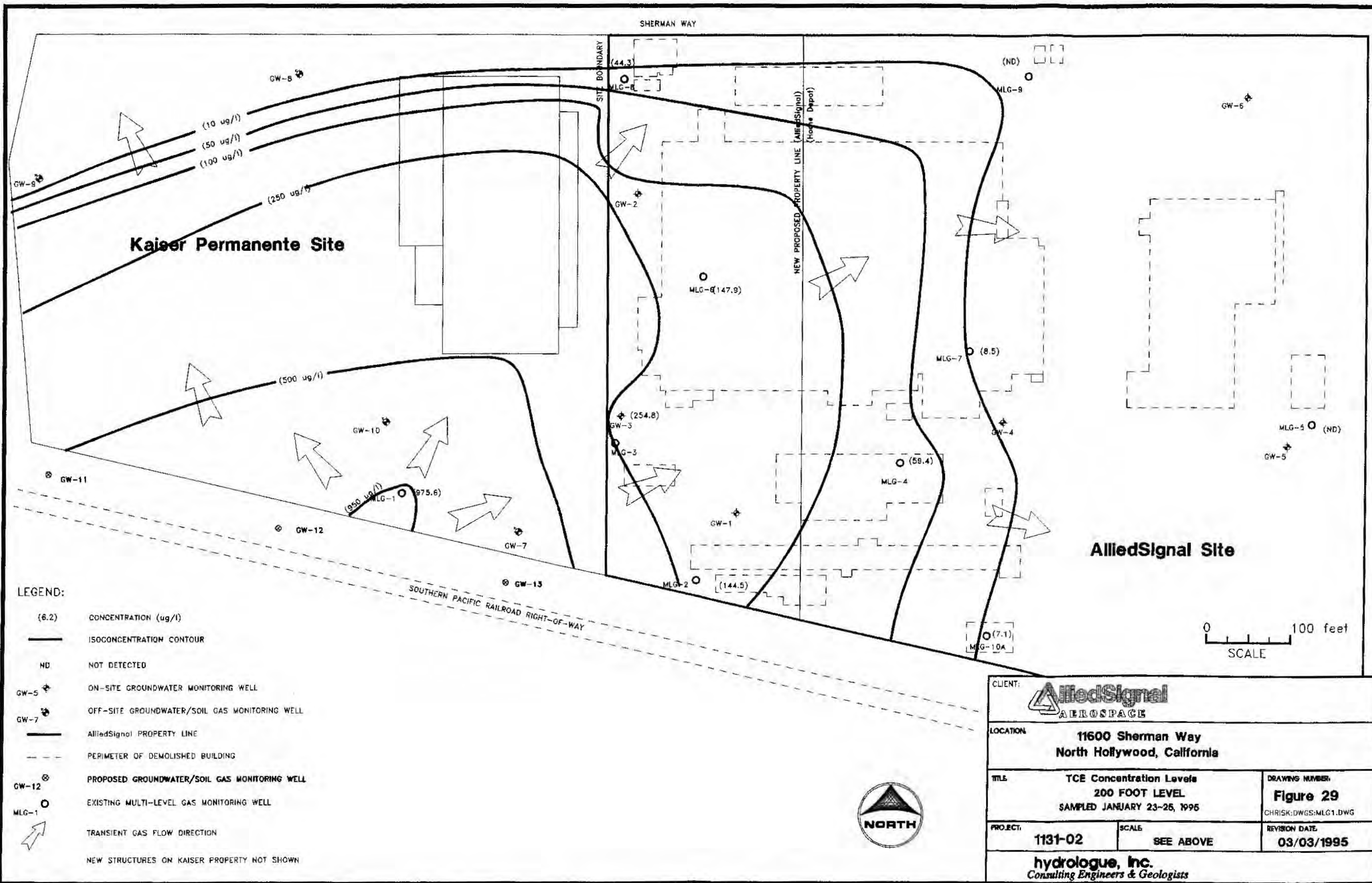
CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: CO2 CONCENTRATION LEVELS SAMPLED DECEMBER 20-23, 1984		DRAWING NUMBER: Figure 25
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



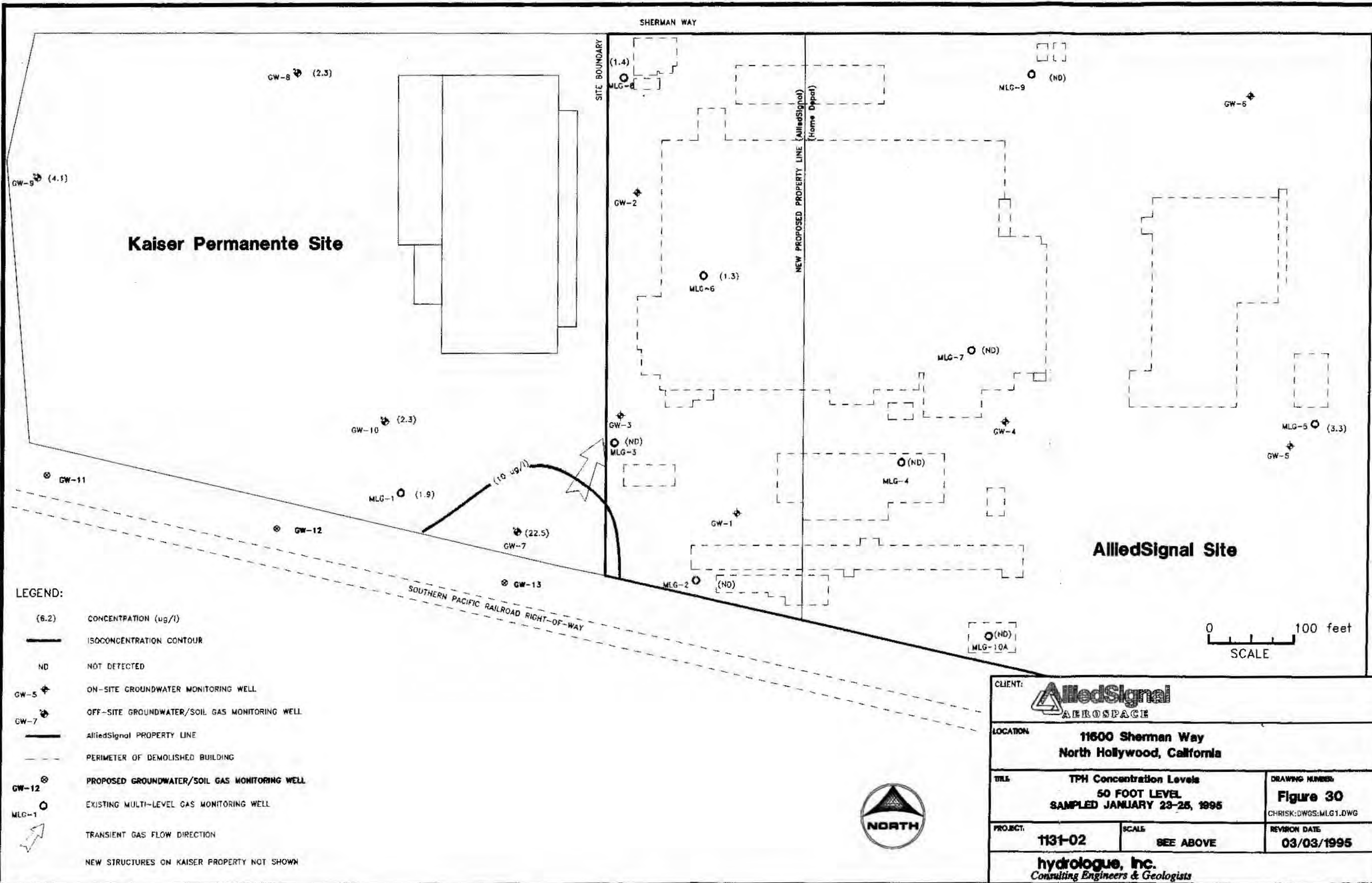




CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TCE Concentration Levels 150 FOOT LEVEL SAMPLED JANUARY 23-25, 1995	DRAWING NUMBER: Figure 28 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TCE Concentration Levels 200 FOOT LEVEL SAMPLED JANUARY 23-26, 1995	DRAWING NUMBER: Figure 29 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



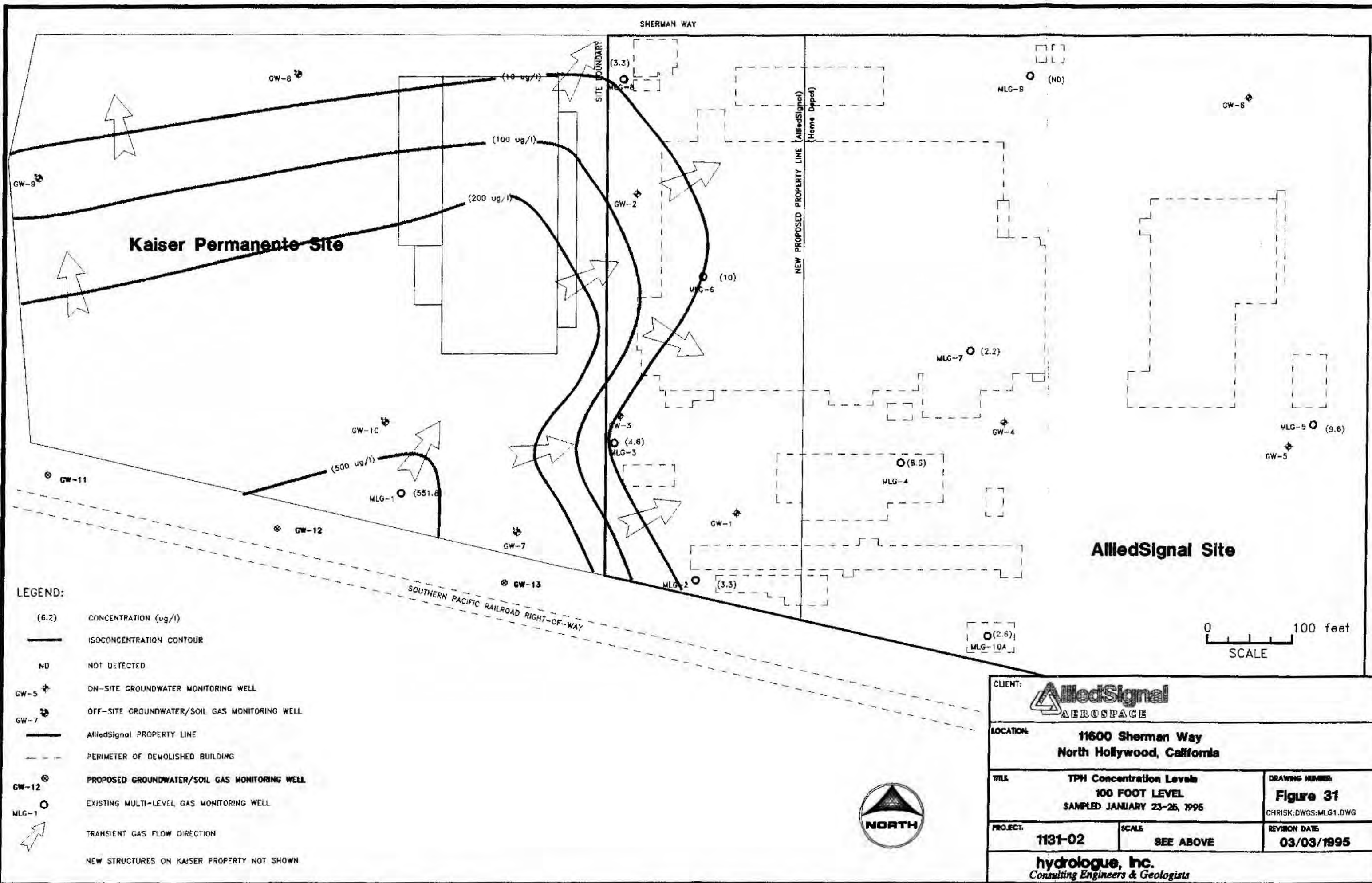
LEGEND:

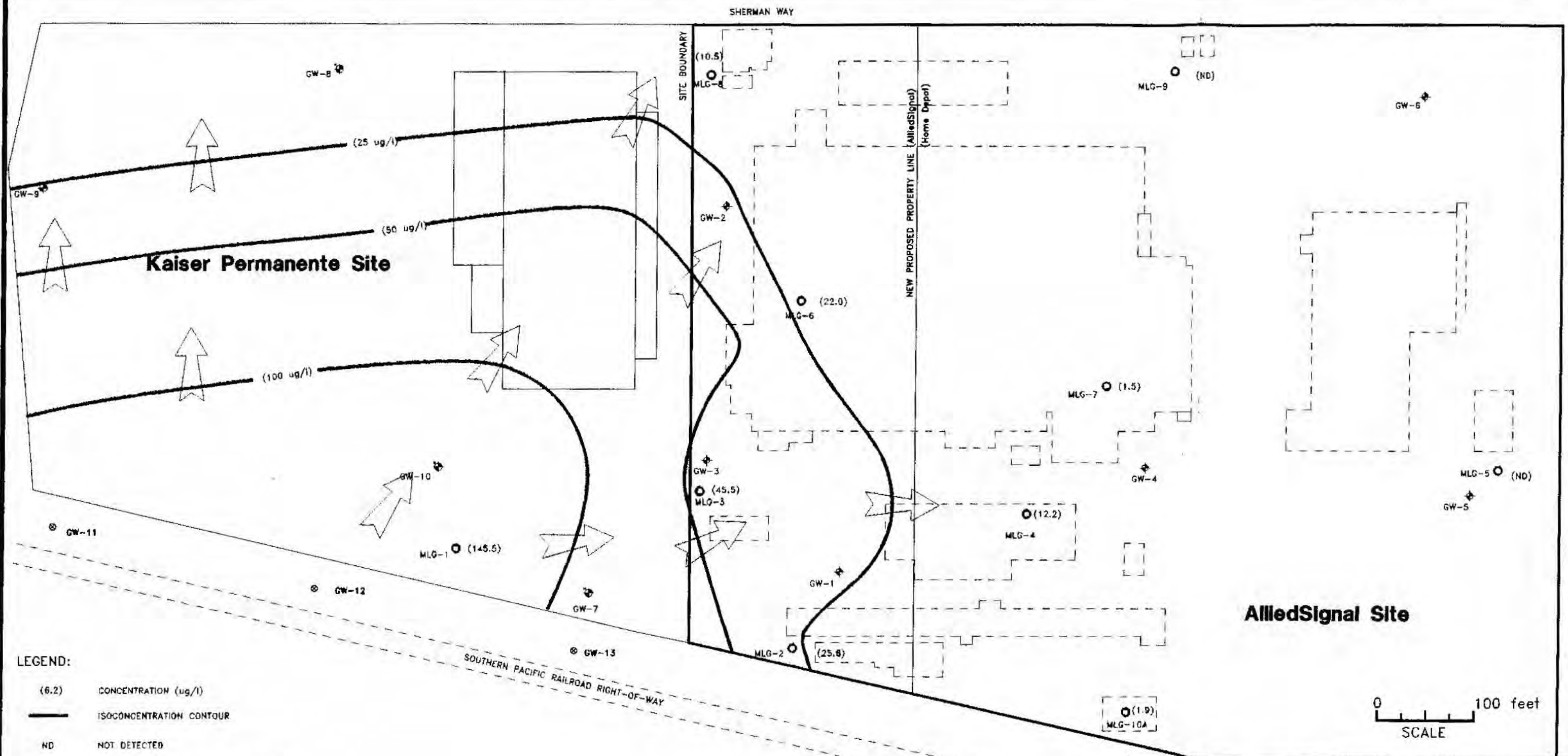
- (6.2) CONCENTRATION (ug/l)
- ISOCONCENTRATION CONTOUR
- ND NOT DETECTED
- GW-5 ON-SITE GROUNDWATER MONITORING WELL
- GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
- AlliedSignal PROPERTY LINE
- PERIMETER OF DEMOLISHED BUILDING
- GW-12 PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
- MLG-1 EXISTING MULTI-LEVEL GAS MONITORING WELL
- ↗ TRANSIENT GAS FLOW DIRECTION
- NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN



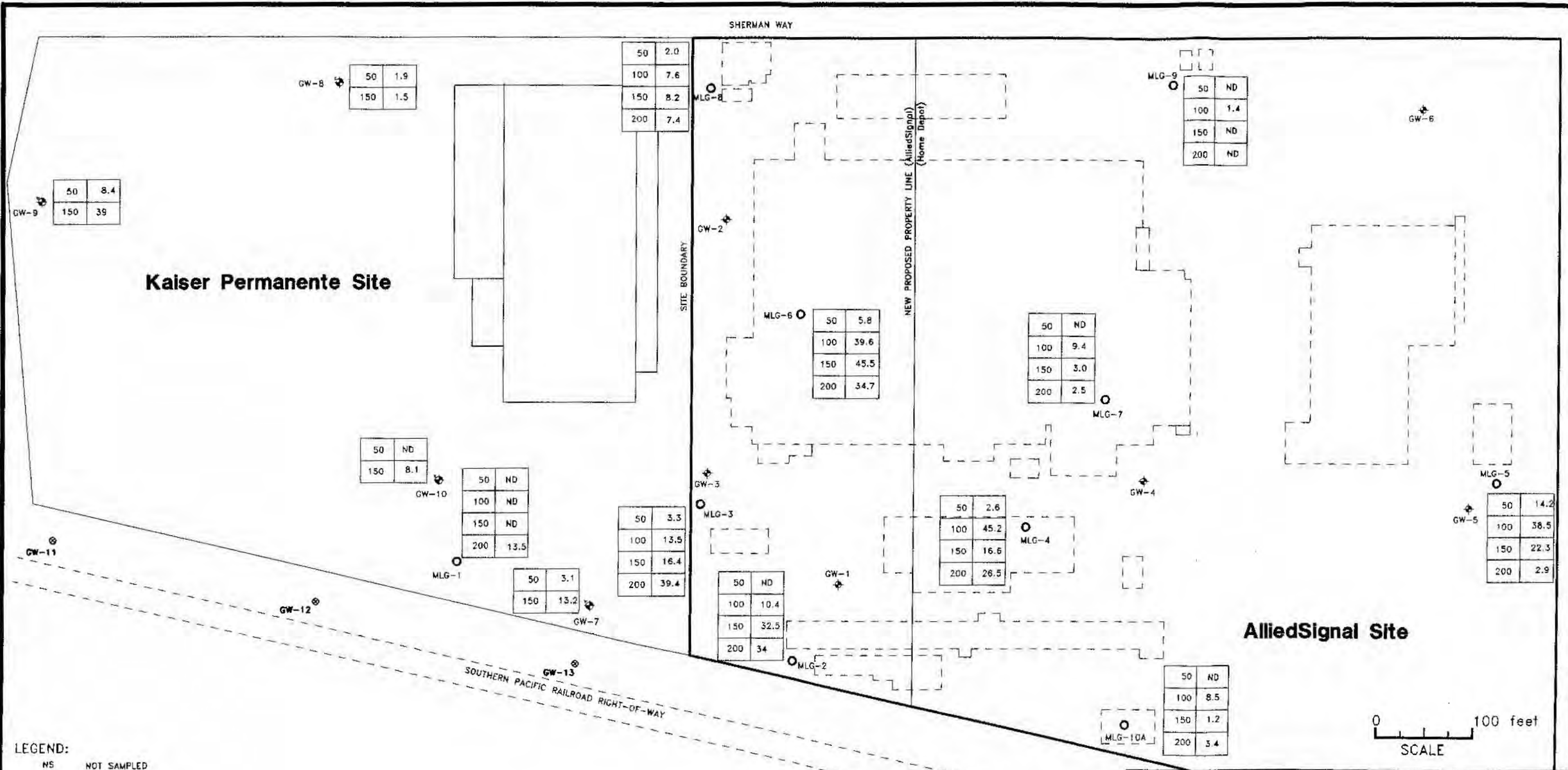
0 100 feet
SCALE

CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 50 FOOT LEVEL SAMPLED JANUARY 23-25, 1995	DRAWING NUMBER: Figure 30 CHRISK:DWGS:MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		

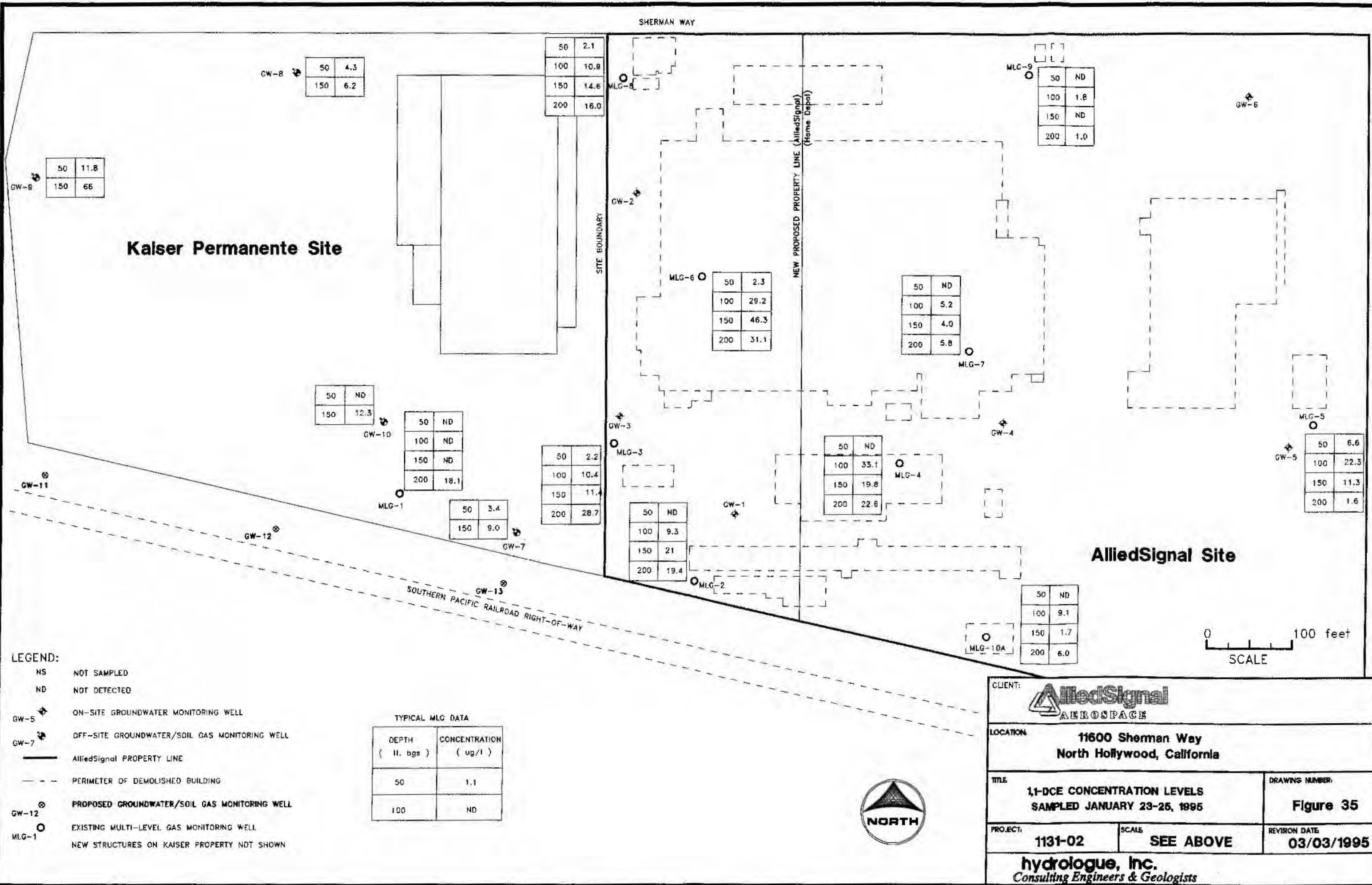


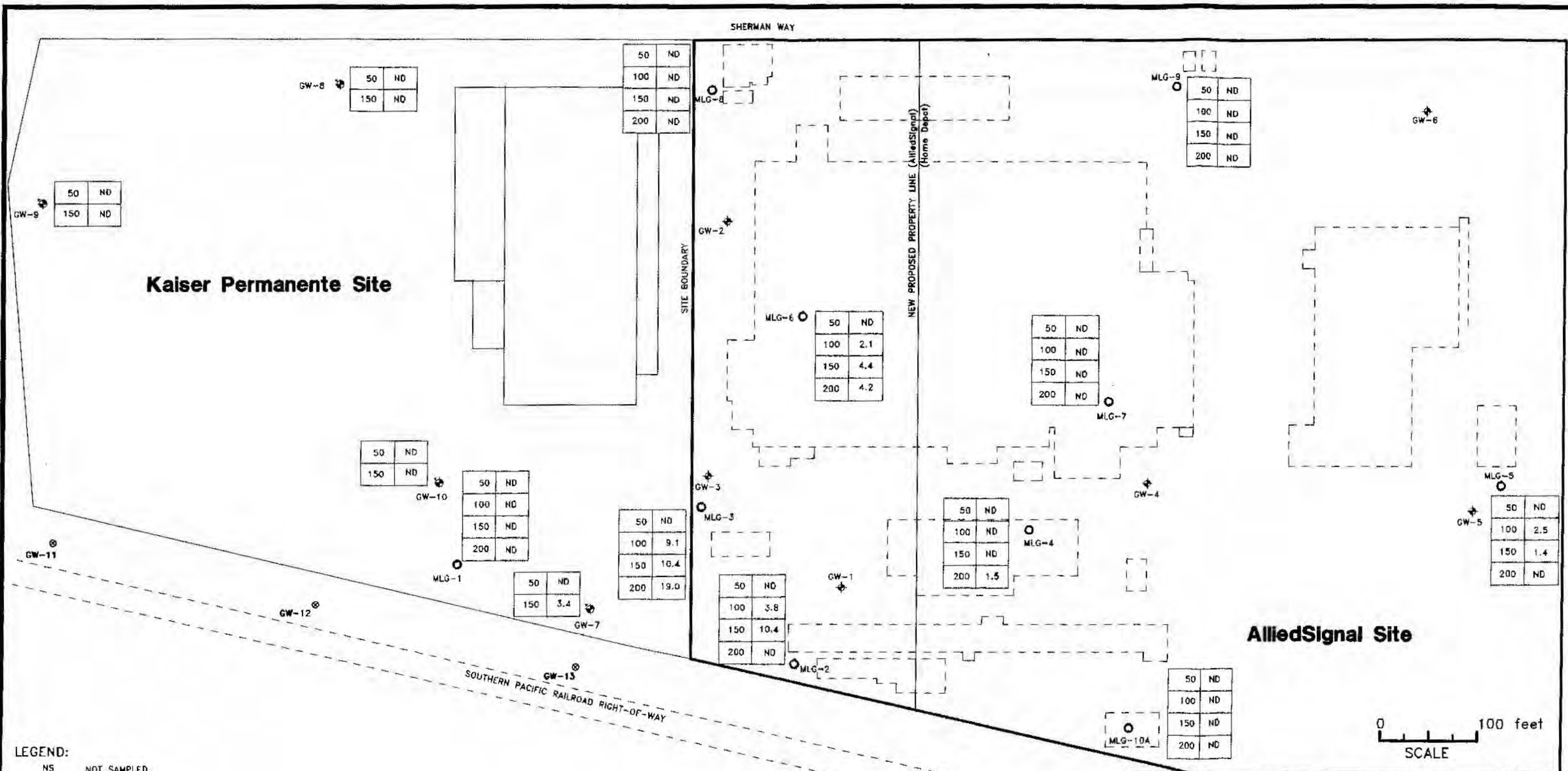


CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: TPH Concentration Levels 200 FOOT LEVEL SAMPLED JANUARY 23-25, 1995	DRAWING NUMBER: Figure 33 CHRISK.DWGS.MLG1.DWG	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: 1,1,1-TCA CONCENTRATION LEVELS SAMPLED JANUARY 23-25, 1995		DRAWING NUMBER: Figure 34
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		





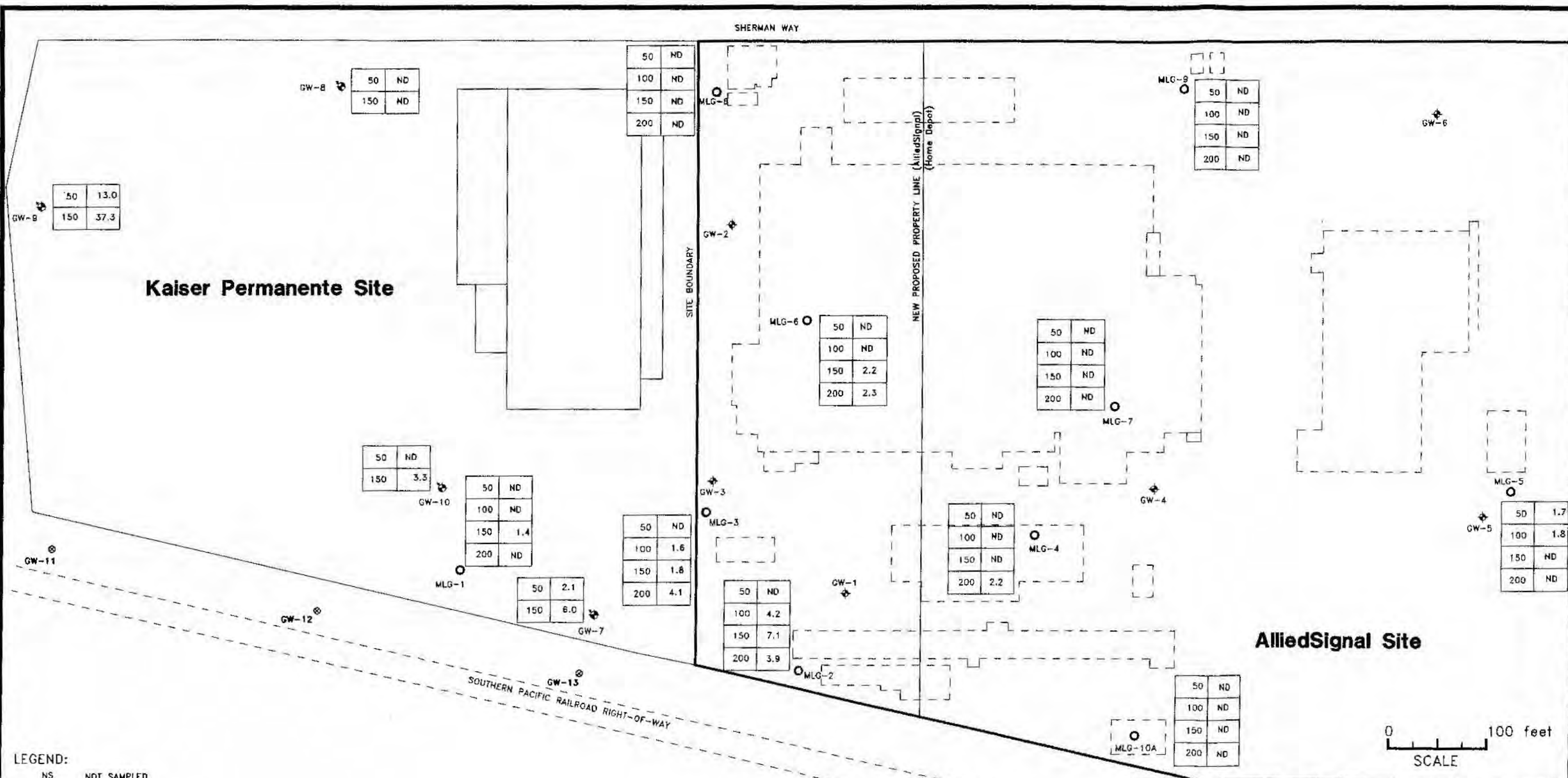
- LEGEND:
- NS NOT SAMPLED
 - ND NOT DETECTED
 - GW-5 ON-SITE GROUNDWATER MONITORING WELL
 - GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
 - AlliedSignal PROPERTY LINE
 - - - PERIMETER OF DEMOLISHED BUILDING
 - ⊗ PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
 - EXISTING MULTI-LEVEL GAS MONITORING WELL
 - MLG-1 NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN

TYPICAL MLG DATA

DEPTH (ft. bgs)	CONCENTRATION (ug/l)
50	1.1
100	ND



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: 1,1-DCA CONCENTRATION LEVELS SAMPLED JANUARY 23-25, 1995	DRAWING NUMBER: Figure 36	
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. Consulting Engineers & Geologists		



- LEGEND:**
- NS NOT SAMPLED
 - ND NOT DETECTED
 - GW-5 ON-SITE GROUNDWATER MONITORING WELL
 - GW-7 OFF-SITE GROUNDWATER/SOIL GAS MONITORING WELL
 - AlliedSignal PROPERTY LINE
 - - - PERIMETER OF DEMOLISHED BUILDING
 - ⊗ PROPOSED GROUNDWATER/SOIL GAS MONITORING WELL
 - EXISTING MULTI-LEVEL GAS MONITORING WELL
 - MLG-1 NEW STRUCTURES ON KAISER PROPERTY NOT SHOWN

TYPICAL MLG DATA

DEPTH (ft. bgs)	CONCENTRATION (ug/l)
50	1.1
100	ND



CLIENT: AlliedSignal AEROSPACE		
LOCATION: 11600 Sherman Way North Hollywood, California		
TITLE: PCE CONCENTRATION LEVELS SAMPLED JANUARY 23-25, 1995		DRAWING NUMBER: Figure 37
PROJECT: 1131-02	SCALE: SEE ABOVE	REVISION DATE: 03/03/1995
hydrologue, Inc. <i>Consulting Engineers & Geologists</i>		

APPENDIX A
TEG REPORT NO. 941207CM
DECEMBER 18, 1994



December 18, 1994

Mr. Seyed Mortazavi
Hydrologue, Inc.
1155 East Green Street
Pasadena, CA 91106

**SUBJECT: DATA REPORT - SOIL VAPOR SURVEY - ALLIED SIGNAL, 11600
SHERMAN WAY, NORTH HOLLYWOOD, CA - HYDROLOGUE
PROJECT #1131-00**

TEG Project #941207CM

Mr. Mortazavi:

Please find enclosed a data report for the soil vapor survey conducted by TEG at the above referenced site for Hydrologue. Soil vapor was collected by TEG and analyzed on-site in TEG's DOHS certified mobile laboratory (CERT #1667). TEG personnel analyzed soil vapor from 46 points for:

- volatile halogenated hydrocarbons by EPA Method 8010
- volatile aromatic hydrocarbons (BTEX) by EPA Method 8020
- total petroleum hydrocarbons (TPH) by DOHS Modified EPA Method 8015
- Fixed Gases

The results of the analyses are summarized in the attached tables. Also enclosed are brief descriptions of TEG's soil vapor procedure and standard chromatograms of the analyses performed on the samples.

TEG appreciates the opportunity to provide analytical services to Hydrologue for this project. If you have any questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Dr. Blayne Hartman



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941207CM

TOTAL PETROLEUM HYDROCARBONS (EPA Method 8015) ANALYSES OF VAPORS

	1 VOL	2 VOL	3 VOL	6 VOL	9 VOL	12 VOL	15 VOL
DATE ANALYZED	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94
TIME ANALYZED	09:55	10:12	10:23	10:36	11:02	11:10	11:22
DEPTH (feet)	200	200	200	200	200	200	200
METHANE	3.4	3.6	3.6	3.5	3.7	3.6	3.4
TPH	11.6	12.4	13.0	16.2	17.1	19.8	17.3

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941207CM

VOLATILE HALOGENATED, AROMATIC, AND TOTAL PETROLEUM HYDROCARBONS (EPA Method 8010/8020/8015) AND FIXED GASES ANALYSES OF VAPORS

	BLANK	MLG6	MLG6	MLG6	MLG6	MLG4	MLG4	MLG4	MLG4	MLG10	MLG10	MLG10	MLG10	MLG10 DUP
DATE ANALYZED	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94	12/07/94
TIME ANALYZED	10:30	11:40	12:30	13:00	13:31	14:11	14:42	15:22	15:10	15:49	15:59	16:30	17:04	17:37
DEPTH (feet)	--	200	150	100	50	200	150	100	50	200	150	100	50	50
1,1 DICHLORO ETHANE	nd	1.4	1.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	14.5	16.8	16.0	1.8	9.2	11.0	10.6	nd	nd	1.5	2.6	nd	nd
1,1,1 TRICHLORO ETHANE	nd	10.9	16.0	24.4	3.8	5.6	5.6	11.5	nd	nd	1.4	1.4	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Cis DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Trans DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	1.1	1.7	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHYLENE CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2 TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2 TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	2.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	87.2	21.8	7.6	nd	23.7	12.2	3.6	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L FOR EACH COMPOUND

METHANE	nd	4.0	3.7	2.5	2.0	2.9	3.1	3.0	2.8	2.4	3.1	2.2	1.9	2.2
TPH	nd	15.4	9.1	6.9	nd	2.4	4.8	3.0	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR

CARBON DIOXIDE (% BY VOLUME)	nd	0.68	0.45	1.06	0.89	0.51	0.24	0.16	1.05	0.10	0.12	0.10	0.08	0.05
OXYGEN (% BY VOLUME)	21.5	15.9	19.8	19.3	19.1	18.7	19.6	19.1	18.8	18.8	21.1	20.8	21.2	18.6

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)
ANALYSES PERFORMED BY: MR. PAUL MOSHER
DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941207CM

VOLATILE HALOGENATED, AROMATIC, AND TOTAL PETROLEUM HYDROCARBONS (EPA Method 8010/8020/8015) AND FIXED GASES ANALYSES OF VAPORS

	BLANK	GW10	GW10A	PURGE B	PURGE C	PURGE D	PURGE E	PURGE F	PURGE G	PURGE H	GW10B	GW7
DATE ANALYZED	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94
TIME ANALYZED	08:42	16:21	16:26	17:01	17:12	17:23	17:38	17:56	18:10	18:22	18:37	21:28
DEPTH (feet)	--	240	240	240	240	240	240	240	240	240	240	240
1,1 DICHLORO ETHANE	nd	nd	nd	--	--	--	--	--	--	--	nd	1.1
1,1 DICHLORO ETHENE	nd	nd	3.0	--	--	--	--	--	--	--	13.5	6.6
1,1,1 TRICHLORO ETHANE	nd	nd	1.5	--	--	--	--	--	--	--	11.6	5.7
1,1,2 TRICHLORO ETHANE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
1,2 Cis DICHLORO ETHENE	nd	nd	1.2	--	--	--	--	--	--	--	5.6	3.8
1,2 DICHLORO ETHANE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
1,2 Trans DICHLORO ETHENE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
CARBON TETRACHLORIDE	nd	nd	nd	--	--	--	--	--	--	--	3.7	1.3
CHLOROFORM	nd	nd	nd	--	--	--	--	--	--	--	3.9	2.5
METHYLENE CHLORIDE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
1,1,1,2 Tetrachloro ETHANE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
1,1,2,2 Tetrachloro ETHANE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
Tetrachloro ETHENE	nd	nd	nd	--	--	--	--	--	--	--	3.4	nd
TRICHLORO ETHENE	nd	31.7	84.5	--	--	--	--	--	--	--	686	220.8
BENZENE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
TOLUENE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
ETHYLBENZENE	nd	nd	nd	--	--	--	--	--	--	--	nd	nd
TOTAL XYLENES	nd	nd	nd	--	--	--	--	--	--	--	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L FOR EACH COMPOUND

METHANE	nd	3.3	2.1	4.3	4.1	3.4	4.8	3.6	3.6	3.9	3.7	3.2
TPH	nd	14.6	13.3	47.4	61.7	67.8	100.9	117.0	121.1	116.0	66.9	35.3

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR

CARBON DIOXIDE (% BY VOLUME)	nd	0.37	nd	--	--	--	--	--	--	--	1.13	1.05
OXYGEN (% BY VOLUME)	nd	20.09	nd	--	--	--	--	--	--	--	17.09	18.32

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941207CM

VOLATILE HALOGENATED, AROMATIC, AND TOTAL PETROLEUM HYDROCARBONS (EPA Method 8010/8020/8015) AND FIXED GASES ANALYSES OF VAPORS

	BLANK	MLG2	MLG2	MLG2	MLG2	MLG3	MLG3	MLG3	MLG3	MLG1
DATE ANALYZED	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94
TIME ANALYZED	08:42	09:16	09:28	10:12	10:45	11:10	11:26	12:03	12:05	13:23
DEPTH (feet)	--	200	150	100	50	200	150	100	50	200
1,1 DICHLORO ETHANE	nd	4.3	nd	nd	nd	6.8	2.5	2.1	nd	nd
1,1 DICHLORO ETHENE	nd	13.0	nd	nd	nd	12.8	4.0	nd	nd	nd
1,1,1 TRICHLORO ETHANE	nd	20.8	nd	nd	nd	20.8	5.8	4.8	nd	2.7
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Cis DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.9
1,2 DICHLORO ETHANE	nd	6.7	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Trans DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.2
METHYLENE CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2 TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2 TETRACHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	3.3	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE	nd	133.1	12.4	1.7	3.0	80.9	6.3	6.3	1.2	166.5
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L FOR EACH COMPOUND

METHANE	nd	3.9	2.3	nd	2.5	3.6	2.9	2.8	2.9	3.5
TPH	nd	20.5	1.3	3.0	nd	14.8	nd	4.3	nd	26.4

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR

CARBON DIOXIDE (% BY VOLUME)	nd	nd	0.14	0.10	0.11	1.01	0.47	0.88	0.30	0.76
OXYGEN (% BY VOLUME)	21.5	nd	19.9	20.4	20.4	17.2	20.2	19.0	20.7	19.2

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)
ANALYSES PERFORMED BY: MR. PAUL MOSHER
DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
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North Hollywood, CA

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VOLATILE HALOGENATED, AROMATIC, AND TOTAL PETROLEUM HYDROCARBONS (EPA Method 8010/8020/8015) AND FIXED GASES ANALYSES OF VAPOR

	MLG1	MLG1	MLG1	GW10	GW10	GW7	GW7	GW8	GW8
DATE ANALYZED	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94	12/08/94
TIME ANALYZED	13:35	14:53	14:32	18:51	19:21	19:42	19:51	20:30	20:54
DEPTH (feet)	150	100	50	150	50	150	50	150	50
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	2.0	nd	nd	nd
1,1 DICHLORO ETHENE	nd	nd	nd	4.4	nd	8.3	nd	nd	4.4
1,1,1 TRICHLORO ETHANE	1.1	1.1	nd	2.4	nd	9.9	nd	nd	1.2
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIs DICHLORO ETHENE	4.5	7.8	1.2	3.6	nd	nd	nd	nd	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Trans DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
CARBON Tetrachloride	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	9.2	1.7	nd	1.7	nd	nd	nd	nd	nd
METHYLENE CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2 Tetrachloro ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2 Tetrachloro ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHENE	nd	nd	nd	nd	nd	4.0	nd	nd	1.4
Trichloro ETHENE	1074	1053	158	222	9.7	351.5	25.3	57.6	4.9
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	9.0	13.0	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	1.7	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	1.6	4.0	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L FOR EACH COMPOUND

METHANE	3.6	2.7	3.2	3.0	1.8	3.0	2.5	2.6	3.2
TPH	88.7	158.6	22.7	57.7	nd	34.0	3.4	7.8	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR

CARBON DIOXIDE (% BY VOLUME)	1.21	1.43	1.57	3.70	2.15	3.85	1.12	0.06	0.93
OXYGEN (% BY VOLUME)	16.8	8.5	17.2	12.4	16.4	11.9	18.6	21.0	19.0

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)
ANALYSES PERFORMED BY: MR. PAUL MOSHER
DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
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VOLATILE HALOGENATED, AROMATIC, AND TOTAL PETROLEUM HYDROCARBONS (EPA Method 8010/8020/8015) AND FIXED GASES ANALYSES OF VAPORS

	BLANK	MLG7	MLG7	MLG7	MLG7	MLG5	MLG5
DATE ANALYZED	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94
TIME ANALYZED	10:16	10:58	11:09	11:38	11:43	12:11	12:15
DEPTH (feet)	--	200	150	100	50	200	150
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	nd	nd	2.0	nd	nd	4.1
1,1,1 TRICHLORO ETHANE	nd	nd	nd	3.3	nd	nd	7.3
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd
1,2 Cis DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd
1,2 Trans DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd
CARBON Tetrachloride	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd
METHYLENE CHLORIDE	nd	nd	nd	nd	nd	nd	nd
1,1,1,2 Tetrachloro ETHANE	nd	nd	nd	nd	nd	nd	nd
1,1,2,2 Tetrachloro ETHANE	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHENE	nd	nd	nd	nd	nd	nd	nd
Trichloro ETHENE	nd	nd	1.1	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd	nd
ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L FOR EACH COMPOUND							
METHANE	nd	3.2	2.7	2.8	3.4	3.7	2.3
TPH	nd	nd	nd	nd	nd	nd	2.2
ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR							
CARBON DIOXIDE (% BY VOLUME)	nd	0.11	0.07	0.32	0.68	0.29	0.12
OXYGEN (% BY VOLUME)	21.5	20.6	21.6	19.8	18.1	19.8	20.2

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941207CM

VOLATILE HALOGENATED, AROMATIC, AND TOTAL PETROLEUM HYDROCARBONS (EPA Method 8010/8020/8015) AND FIXED GASES ANALYSES OF VAPORS

	MLG5	MLG5	MLG5 DUP	GW9	GW9	GW9 DUP	MLG8	MLG8
DATE ANALYZED	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94	12/09/94
TIME ANALYZED	12:39	12:46	13:04	14:24	14:28	15:00	15:27	15:44
DEPTH (feet)	100	50	50	150	50	50	200	150
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	7.8	nd	1.4	76.5	14.1	11.8	6.6	nd
1,1,1 TRICHLORO ETHANE	15.4	2.1	1.9	40.5	11.5	9.8	2.6	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Cis DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 Trans DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
CARBON TETRACHLORIDE	nd	nd	nd	6.2	nd	nd	1.2	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
METHYLENE CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2 Tetrachloro ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2 Tetrachloro ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHENE	nd	nd	nd	34.3	14.3	10.2	nd	nd
TRICHLORO ETHENE	nd	nd	nd	32.7	7.3	4.6	19.0	1.9
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L FOR EACH COMPOUND								
METHANE	3.2	3.5	4.4	3.5	3.9	3.8	nd	3.3
TPH	2.9	nd	nd	27.2	5.8	4.8	nd	nd
ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 PPM VAPOR								
CARBON DIOXIDE (% BY VOLUME)	0.17	0.15	nd	0.87	0.87	0.88	nd	0.22
OXYGEN (% BY VOLUME)	19.9	20.7	nd	17.0	18.6	19.0	nd	20.1

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY CONTINUING CALIBRATION STANDARD REPORT

DATE: 12/07/94

SUPPLY SOURCE: TEG ANQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.6	10	6.2	6441	644.1	15.9%
CHLOROFORM	HALL	455.3	10	5.7	5055	505.5	11.0%
DICHLORO ETHANE (11)	HALL	446.8	10	4.4	4584	458.4	2.6%
DICHLORO ETHANE (12)	HALL	600.3	10	6.6	5230	523.0	12.9%
DICHLORO ETHENE (11)	PID	4.8	10	3.0	48	4.8	0.3%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.1	68	6.8	2.9%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.8	107	10.7	2.7%
DICHLOROMETHANE	HALL	468.2	10	3.6	4710	471.0	0.6%
TetraCHLORO ETHANE (1112)	HALL	535.0	10	14.0	5695	569.5	6.5%
TetraCHLORO ETHANE (1122)	HALL	480.9	10	17.5	4805	480.5	0.1%
TetraCHLORO ETHENE	PID	6.6	10	11.5	69	6.9	5.2%
TrichLORO ETHANE (111)	HALL	437.5	10	5.9	4826	482.6	10.3%
TrichLORO ETHANE (112)	HALL	347.2	10	11.3	3733	373.3	7.5%
TrichLORO ETHENE	PID	7.5	10	7.6	79	7.9	4.9%
BENZENE	PID	13.2	10	6.5	137	13.7	4.0%
CHLOROBENZENE	PID	15.1	10	13.7	157	15.7	3.8%
ETHYLBENZENE	PID	12.9	10	14.0	134	13.4	3.6%
TOLUENE	PID	12.7	10	10.2	136	13.6	7.3%
m&p-XYLENES	PID	14.1	20	14.4	281	14.1	0.3%
o-XYLENES	PID	12.3	10	15.4	134	13.4	8.7%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY QUALITY CONTROL STANDARD REPORT

DATE: 12/07/94

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.8	10	6.2	5660	566.0	1.8%
CHLOROFORM	HALL	455.3	10	5.7	4443	444.3	2.4%
DICHLORO ETHANE (11)	HALL	446.8	10	4.4	3921	392.1	12.2%
DICHLORO ETHANE (12)	HALL	600.3	10	6.6	4877	487.7	18.8%
DICHLORO ETHENE (11)	PID	4.8	10	3.0	46	4.6	3.7%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.1	67	6.7	1.2%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.8	107	10.7	2.9%
DICHLOROMETHANE	HALL	468.2	10	3.6	4005	400.5	14.5%
Tetrachloro ETHANE (1112)	HALL	535.0	10	14.0	4913	491.3	8.2%
Tetrachloro ETHANE (1122)	HALL	480.9	10	17.5	4114	411.4	14.5%
Tetrachloro ETHENE	PID	6.6	10	11.5	66	6.6	0.3%
Trichloro ETHANE (111)	HALL	437.5	10	5.9	4323	432.3	1.2%
Trichloro ETHANE (112)	HALL	347.2	10	11.3	3206	320.6	7.7%
Trichloro ETHENE	PID	7.5	10	7.6	78	7.8	3.4%
BENZENE	PID	13.2	10	6.5	134	13.4	1.8%
CHLOROBENZENE	PID	15.1	10	13.7	154	15.4	1.7%
ETHYLBENZENE	PID	12.9	10	14.0	134	13.4	4.2%
TOLUENE	PID	12.7	10	10.2	130	13.0	2.6%
m&p-XYLENES	PID	14.1	20	14.4	288	14.4	2.3%
o-XYLENES	PID	12.3	10	15.4	128	12.8	4.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY QUALITY CONTROL STANDARD REPORT

DATE: 12/07/94

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	907.8	10	7.4	7958	795.8	12.3%
CHLOROFORM	HALL	712.2	10	6.8	6989	698.9	1.9%
DICHLORO ETHANE (11)	HALL	539.1	10	5.4	6143	614.3	13.3%
DICHLORO ETHANE (12)	HALL	581.5	10	7.8	5883	588.3	1.2%
DICHLORO ETHENE (11)	PID	43.1	10	3.7	470	47.0	9.0%
DICHLORO ETHENE (12 CIS)	PID	66.6	10	6.2	695	69.5	4.3%
DICHLORO ETHENE (12 TRANS)	PID	112.4	10	4.7	1165	116.5	3.7%
DICHLOROMETHANE	HALL	251.7	10	4.4	5526	552.6	119.5%*
TetraCHLORO ETHANE (1112)	HALL	773.7	10	15.6	7617	761.7	1.5%
TetraCHLORO ETHANE (1122)	HALL	625.2	10	19.2	6737	673.7	7.8%
TetraCHLORO ETHENE	PID	74.3	10	13.1	771	77.1	3.6%
TrichLORO ETHANE (111)	HALL	652.1	10	7.1	6231	623.1	4.6%
TrichLORO ETHANE (112)	HALL	539.7	10	12.8	5614	561.4	4.0%
TrichLORO ETHENE	PID	84.6	10	8.9	850	85.0	0.4%
BENZENE	PID	143.7	10	7.7	1497	149.7	4.2%
CHLOROBENZENE	PID	164.3	10	15.3	1660	166.0	1.0%
ETHYLBENZENE	PID	136.4	10	15.7	1434	143.4	5.2%
TOLUENE	PID	145.2	10	11.7	1511	151.1	4.0%
m&p-XYLENES	PID	154.4	20	16.0	3236	161.8	4.8%
o-XYLENES	PID	141.9	10	17.1	1463	146.3	3.1%

* OUT OF CONTROL, BUT COMPOUND NOT DETECTED ON THIS DAY

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY CONTINUING CALIBRATION STANDARD REPORT

DATE: 12/08/94

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	907.8	10	7.4	9501	950.1	4.7%
CHLOROFORM	HALL	712.1	10	6.8	7139	713.9	0.2%
DICHLORO ETHANE (11)	HALL	539.2	10	5.4	5494	549.4	1.9%
DICHLORO ETHANE (12)	HALL	582.5	10	7.8	6501	650.1	11.8%
DICHLORO ETHENE (11)	PID	43.1	20	3.7	465	46.5	7.8%
DICHLORO ETHENE (12 CIS)	PID	66.6	10	6.2	687	68.7	3.1%
DICHLORO ETHENE (12 TRANS)	PID	112.4	10	4.7	1136	113.6	1.3%
DICHLOROMETHANE	HALL	251.7	10	4.4	2954	295.4	17.4%
TetraCHLORO ETHANE (1112)	HALL	773.7	10	15.7	8621	862.1	11.4%
TetraCHLORO ETHANE (1122)	HALL	625.2	10	19.2	7269	726.9	16.3%
TetraCHLORO ETHENE	PID	74.3	10	13.1	790	79.0	6.4%
TrichLORO ETHANE (111)	HALL	652.1	10	7.1	7084	708.4	8.6%
TrichLORO ETHANE (111)	PID	0.263	2000	1.7	510	0.255	3.0%
TrichLORO ETHANE (112)	HALL	539.7	10	12.8	6248	624.8	15.8%
TrichLORO ETHENE	PID	84.6	10	8.9	888	88.8	5.0%
BENZENE	PID	143.7	10	7.8	1535	153.5	6.8%
CHLOROBENZENE	PID	164.3	10	15.3	1710	171.0	4.1%
ETHYLBENZENE	PID	136.4	10	15.7	1471	147.1	7.9%
TOLUENE	PID	145.2	10	11.8	1543	154.3	6.2%
m,p-XYLENES	PID	154.4	20	16.0	2301	165.0	6.9%
o-XYLENES	PID	142.9	10	27.2	1491	149.1	5.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1657)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY QUALITY CONTROL STANDARD REPORT

DATE: 12/08/94

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	907.8	10	7.4	7835	783.5	13.7%
CHLOROFORM	HALL	712.1	10	6.7	6408	640.8	10.0%
DICHLORO ETHANE (11)	HALL	539.1	10	5.3	5588	558.8	3.7%
DICHLORO ETHANE (12)	HALL	581.5	10	7.7	6632	663.2	14.0%
DICHLORO ETHENE (11)	PID	43.1	10	3.7	479	47.9	11.1%
DICHLORO ETHENE (12 CIS)	PID	66.6	10	6.2	710	71.0	6.6%
DICHLORO ETHENE (12 TRANS)	PID	112.4	10	4.7	1135	113.5	1.0%
DICHLOROMETHANE	HALL	251.7	10	4.4	4968	496.8	97.4%*
TetraCHLORO ETHANE (1112)	HALL	773.7	10	15.6	8290	829.0	7.1%
TetraCHLORO ETHANE (1122)	HALL	625.2	10	19.1	6952	695.2	11.2%
TetraCHLORO ETHENE	PID	74.3	10	13.0	776	77.6	4.5%
TriCHLORO ETHANE (111)	HALL	652.1	10	7.1	6241	624.1	4.3%
TriCHLORO ETHANE (112)	HALL	539.7	10	12.7	5574	557.4	3.3%
TriCHLORO ETHENE	PID	84.6	10	8.9	800	80.0	5.5%
BENZENE	PID	143.7	10	7.6	1480	148.0	3.0%
CHLOROBENZENE	PID	164.3	10	15.3	1653	165.3	0.6%
ETHYLBENZENE	PID	136.4	10	15.6	1421	142.1	4.2%
TOLUENE	PID	145.2	10	11.7	1485	148.5	2.3%
m&p-XYLENES	PID	154.4	20	15.9	161.6	161.6	4.6%
o-XYLENES	PID	141.5	10	17.1	1481	148.1	4.4%

* OUT OF CONTROL, BUT COMPOUND NOT DETECTED ON THIS DAY

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY CONTINUING CALIBRATION STANDARD REPORT

DATE: 12/08/94

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.8	10	6.1	5676	567.6	2.1%
CHLOROFORM	HALL	455.3	10	5.6	4825	482.5	6.0%
DICHLORO ETHANE (11)	HALL	446.8	10	4.4	4219	421.9	5.6%
DICHLORO ETHANE (12)	HALL	600.3	10	6.5	5201	520.1	13.4%
DICHLORO ETHENE (11)	PID	4.8	10	2.9	47	4.7	1.5%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.1	69	6.9	4.2%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.8	106	10.6	2.2%
DICHLOROMETHANE	HALL	468.2	10	3.5	4242	424.2	9.4%
Tetrachloro ETHANE (1112)	HALL	535.0	10	14.0	5350	535.0	0.0%
Tetrachloro ETHANE (1122)	HALL	480.9	10	17.6	5148	514.8	7.0%
Tetrachloro ETHENE	PID	6.6	10	11.5	72	7.2	8.8%
Trichloro ETHANE (111)	HALL	437.5	10	5.9	4580	458.0	4.7%
Trichloro ETHANE (112)	HALL	347.2	10	11.3	3647	364.7	5.0%
Trichloro ETHENE	PID	7.5	10	7.6	81	8.1	8.6%
BENZENE	PID	13.2	10	6.4	140	14.0	6.1%
CHLOROBENZENE	PID	15.1	10	13.7	162	16.2	7.4%
ETHYLBENZENE	PID	12.9	10	14.0	138	13.8	6.8%
TOLUENE	PID	12.7	10	10.2	138	13.8	8.7%
m&p-XYLENES	PID	14.1	20	14.4	307	25.3	6.8%
o-XYLENES	PID	12.3	10	15.5	138	13.8	12.2%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY QUALITY CONTROL STANDARD REPORT

DATE: 12/08/94

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.8	10	6.2	6515	651.5	17.2%
CHLOROFORM	HALL	455.3	10	5.7	5036	503.6	10.6%
DICHLORO ETHANE (11)	HALL	446.8	10	4.4	4329	432.9	3.1%
DICHLORO ETHANE (12)	HALL	600.3	10	6.6	5929	592.9	1.2%
DICHLORO ETHENE (11)	PID	4.8	10	3.0	47	4.7	2.9%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.1	66	6.6	0.4%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.8	108	10.8	4.0%
DICHLOROMETHANE	HALL	468.2	10	3.6	4523	452.3	3.4%
TetraCHLORO ETHANE (1112)	HALL	535.0	10	14.0	5776	577.6	8.0%
TetraCHLORO ETHANE (1122)	HALL	480.9	10	17.6	5442	544.2	13.2%
TetraCHLORO ETHENE	PID	6.6	10	11.5	66	6.6	0.6%
Trichloro ETHANE (111)	HALL	437.5	10	5.9	4993	499.3	14.1%
Trichloro ETHANE (112)	HALL	347.2	10	11.3	4109	410.9	18.3%
Trichloro ETHENE	PID	7.5	10	7.6	77	7.7	2.1%
BENZENE	PID	13.2	10	6.5	127	12.7	3.5%
CHLOROBENZENE	PID	15.1	10	13.7	155	15.5	2.8%
ETHYLBENZENE	PID	12.9	10	14.1	128	12.8	0.7%
TOLUENE	PID	12.7	10	10.2	132	13.2	3.6%
m&p-XYLENES	PID	14.1	20	14.4	287	14.4	1.8%
o-XYLENES	PID	12.3	10	15.5	125	12.5	1.3%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY CONTINUING CALIBRATION STANDARD REPORT

DATE: 12/09/94

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	907.6	10	7.4	8572	857.2	5.6%
CHLOROFORM	HALL	712.1	10	6.8	7426	742.6	4.3%
DICHLORO ETHANE (11)	HALL	539.1	10	5.4	5880	588.0	9.1%
DICHLORO ETHANE (12)	HALL	581.5	10	7.8	6590	659.0	13.3%
DICHLORO ETHENE (11)	PID	43.1	10	3.7	415	41.5	3.8%
DICHLORO ETHENE (12 CIS)	PID	66.6	10	6.2	672	67.2	0.8%
DICHLORO ETHENE (12 TRANS)	PID	112.4	10	4.7	1066	106.6	5.2%
DICHLOROMETHANE	HALL	251.7	10	4.4	5474	547.4	217.5%*
TetraCHLORO ETHANE (1112)	HALL	773.7	10	15.7	8300	830.0	7.3%
TetraCHLORO ETHANE (1122)	HALL	625.2	10	19.2	6727	672.7	7.6%
TetraCHLORO ETHENE	PID	74.3	10	13.1	774	77.4	4.2%
TrichLORO ETHANE (111)	HALL	652.1	10	7.1	7258	725.8	11.3%
TrichLORO ETHANE (111)	FID	0.263	2000	1.7	510	0.255	3.0%
TrichLORO ETHANE (112)	HALL	539.7	10	12.8	6071	607.1	12.5%
TrichLORO ETHENE	PID	84.6	10	8.9	853	85.3	0.8%
BENZENE	PID	143.7	10	7.7	1394	139.4	3.0%
CHLOROBENZENE	PID	164.3	10	15.3	1651	165.1	0.5%
ETHYLBENZENE	PID	136.4	10	15.7	1352	135.2	0.9%
TOLUENE	PID	145.2	10	11.8	1431	143.1	1.5%
m&p-XYLENES	PID	154.4	20	16.0	3086	154.3	0.1%
o-XYLENES	PID	141.9	10	17.1	1359	135.9	4.3%

* OUT OF CONTROL, BUT COMPOUND NOT DETECTED ON THIS DAY

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY QUALITY CONTROL STANDARD REPORT

DATE: 12/09/94

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	907.8	10	7.4	7542	754.2	16.9%
CHLOROFORM	HALL	712.1	10	6.8	6572	657.2	7.7%
DICHLORO ETHANE (11)	HALL	539.1	10	5.4	5394	539.4	0.1%
DICHLORO ETHANE (12)	HALL	581.5	10	7.8	5897	589.7	1.4%
DICHLORO ETHENE (11)	PID	43.1	10	3.7	366	36.6	15.1%
DICHLORO ETHENE (12 CIS)	PID	66.6	10	6.2	600	60.0	9.9%
DICHLORO ETHENE (12 TRANS)	PID	112.4	10	4.7	943	94.3	15.1%
DICHLOROMETHANE	HALL	251.7	10	4.4	4874	487.4	93.6%
TetraCHLORO ETHANE (1112)	HALL	773.7	10	15.6	8436	843.6	9.0%
TetraCHLORO ETHANE (1122)	HALL	625.2	10	19.2	6912	691.2	10.6%
TetraCHLORO ETHENE	PID	74.3	10	13.2	654	65.4	11.9%
Trichloro ETHANE (111)	HALL	652.1	10	7.1	6039	603.9	7.4%
Trichloro ETHANE (112)	HALL	539.7	10	12.8	5607	560.7	3.9%
Trichloro ETHENE	PID	84.6	10	8.9	734	73.4	13.2%
BENZENE	PID	143.7	10	7.7	1228	122.8	14.5%
CHLOROBENZENE	PID	164.3	10	15.3	1520	152.0	7.5%
ETHYLBENZENE	PID	136.4	10	15.6	1267	126.7	7.1%
TOLUENE	PID	145.2	10	11.7	1304	130.4	10.2%
m&p-XYLENES	PID	154.4	20	16.0	2847	242.4	7.8%
o-XYLENES	PID	141.9	10	17.1	1279	127.9	9.5%

* OUT OF CONTROL, BUT COMPOUND NOT DETECTED ON THIS DAY

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



SOIL GAS DAILY QUALITY CONTROL STANDARD REPORT

DATE: 12/09/94

SUPPLY SOURCE: CHEMSERVE 8021 MIN

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.8	10	6.1	5767	576.7	3.9%
CHLOROFORM	HALL	455.3	10	5.6	5013	501.3	10.1%
DICHLORO ETHANE (11)	HALL	446.6	10	4.3	3663	366.3	28.0%
DICHLORO ETHANE (12)	HALL	600.3	10	6.4	4869	486.9	18.9%
DICHLORO ETHENE (11)	PID	4.8	10	2.9	41	4.1	14.9%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.0	58	5.8	11.8%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.7	99	9.9	4.4%
DICHLOROMETHANE	HALL	468.2	10	3.5	3649	364.9	22.1%
TetraCHLORO ETHANE (1112)	HALL	535.0	10	13.9	5907	590.7	10.4%
TetraCHLORO ETHANE (1122)	HALL	480.9	10	17.4	5033	503.3	4.7%
TetraCHLORO ETHENE	PID	6.6	10	11.4	62	6.2	6.7%
TrichLORO ETHANE (111)	HALL	437.5	10	5.8	4658	465.8	6.5%
TrichLORO ETHANE (112)	HALL	347.2	10	11.2	4050	405.0	16.7%
TrichLORO ETHENE	PID	7.5	10	7.5	70	7.0	6.4%
BENZENE	PID	13.2	10	6.3	121	12.1	8.4%
CHLOROBENZENE	PID	15.1	10	13.6	140	14.0	7.4%
ETHYLBENZENE	PID	12.9	10	13.9	122	12.2	5.8%
TOLUENE	PID	12.7	10	10.1	117	11.7	7.7%
m&p-XYLENES	PID	14.1	20	14.2	268	13.4	5.1%
o-XYLENES	PID	12.3	10	15.3	116	11.6	5.7%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DONS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY CONTINUING CALIBRATION STANDARD REPORT

DATE: 12/09/94

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.6	10	6.2	5389	538.9	3.0%
CHLOROFORM	HALL	455.3	10	5.7	4392	439.2	3.5%
DICHLORO ETHANE (11)	HALL	446.8	10	4.4	3920	392.0	12.3%
DICHLORO ETHANE (12)	HALL	600.3	10	6.6	5081	508.1	15.4%
DICHLORO ETHENE (11)	PID	4.8	10	2.9	45	4.5	7.2%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.1	63	6.3	3.9%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.8	105	10.5	0.8%
DICHLOROMETHANE	HALL	468.2	10	3.5	3799	379.9	18.9%
TetraCHLORO ETHANE (1112)	HALL	535.0	10	14.1	4967	496.7	7.2%
TetraCHLORO ETHANE (1122)	HALL	480.9	10	17.6	4217	421.7	10.2%
TetraCHLORO ETHENE	PID	6.6	10	11.5	66	6.8	3.5%
TrichLORO ETHANE (111)	HALL	437.5	10	5.9	4235	423.5	3.2%
TrichLORO ETHANE (112)	HALL	347.2	10	11.3	3279	327.9	2.7%
TrichLORO ETHENE	PID	7.5	10	7.6	76	7.6	1.9%
BENZENE	PID	13.2	10	6.5	128	12.8	2.7%
CHLOROBENZENE	PID	15.1	10	13.7	151	15.1	0.1%
ETHYLBENZENE	PID	12.9	10	14.1	132	13.2	2.4%
TOLUENE	PID	12.7	10	10.3	132	13.2	3.7%
m&p-XYLENES	PID	14.1	20	14.4	292	14.6	3.7%
o-XYLENES	PID	12.3	10	15.5	125	12.5	1.9%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOCS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE PREPARATION DATE:12/07/94, FREON 11, FREON 12, 11/05/94, VINYL CHLORIDE, AND CHLOROETHANE 8/4/94

LAB: TEG CRUISEMASTER
INSTRUMENT: GC14-LEFT

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				AVE RF	RSD
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF		
CARBON TETRACHLORIDE	HALL	7.4	5	4332	866.4	7.4	10	8803	880.3	7.4	25	24416	976.6	907.8	6.6%
CHLOROFORM	HALL	6.8	5	3303	660.5	6.8	10	6531	653.1	6.8	25	20569	822.8	712.1	13.5%
DICHLOROMETHANE	HALL	4.4	5	1173	234.6	4.4	10	2300	230.0	4.4	25	7264	290.6	251.7	13.4%
1,1 DICHLORO ETHANE	HALL	5.4	5	2732	546.3	5.4	10	5022	502.2	5.4	25	14217	568.7	539.1	6.3%
1,2 DICHLORO ETHANE	HALL	7.8	5	3362	672.4	7.8	10	5303	530.3	7.8	25	13544	541.8	581.5	13.6%
1,1 DICHLORO ETHENE	PID	3.7	5	230	46.1	3.7	10	403	40.3	3.7	25	1070	42.8	43.1	6.7%
Cis 1,2 DICHLORO ETHENE	PID	6.2	5	331	66.2	6.2	10	641	64.1	6.2	25	1741	69.6	66.6	4.2%
Tr 1,2 DICHLORO ETHENE	PID	4.8	5	552	110.5	4.7	10	1112	111.2	4.7	25	2887	115.5	112.4	2.4%
TETRACHLORO ETHANE (1112)	HALL	15.7	5	3780	755.9	15.6	10	7879	787.9	15.6	25	21401	856.0	773.3	9.8%
TETRACHLORO ETHANE (1122)	HALL	19.2	5	2981	596.2	19.2	10	5730	573.0	19.2	25	17657	706.3	625.2	11.4%
TETRACHLORO ETHENE	PID	13.1	5	371	74.2	13.1	10	746	74.6	13.1	25	1852	74.1	74.3	0.4%
1,1,1 TRICHLORO ETHANE	HALL	7.1	5	3080	615.9	7.1	10	6166	616.6	7.1	25	18092	723.7	652.1	9.5%
1,1,1 TRICHLORO ETHANE	FID	1.9	500	140	0.280	1.9	2500	605	0.242	1.9	10000	2662	0.266	0.263	7.4%
1,1,2 TRICHLORO ETHANE	HALL	12.8	5	2411	482.3	12.8	10	5149	514.9	12.8	25	15551	622.0	539.7	13.5%
TRICHLORO ETHENE	PID	9.0	5	419	83.7	9.0	10	839	83.9	9.0	25	2153	86.1	84.6	1.6%
VINYL CHLORIDE	HALL	2.5	5	1050	210.0	2.5	25	5410	216.4	2.4	50	8166	163.3	196.6	14.7%
FREON 11	HALL	3.3	5	9134	1826.9	3.3	15	21331	1422.1	3.3	25	34979	1399.2	1549.4	15.5%
FREON 12	HALL	2.2	5	5044	1008.8	2.2	13	10098	776.7	2.2	21	18381	875.3	886.9	13.1%
FREON 113	HALL	3.8	10	3342	334.2	3.8	20	6648	332.4	3.8	50	16129	322.6	329.7	1.9%
CHLOROETHANE	HALL	2.9	5	208	41.5	2.8	10	572	57.2	2.7	50	3210	64.2	54.3	21.4%
BENZENE	PID	7.7	5	731	146.3	7.7	10	1413	141.3	7.7	25	3591	143.6	143.7	1.7%
CHLOROBENZENE	PID	15.3	5	819	163.8	15.3	10	1624	162.4	15.3	25	4165	166.6	164.3	1.3%
ETHYLBENZENE	PID	15.7	5	683	136.7	15.7	10	1359	135.9	15.7	25	3412	136.5	136.4	0.3%
TOLUENE	PID	11.8	5	739	147.8	11.8	10	1436	143.6	11.8	25	3608	144.3	145.2	1.6%
m,p-XYLENES	PID	16.0	10	1615	161.5	16.0	20	3209	160.5	16.0	50	7057	141.1	154.4	7.4%
o-XYLENES	PID	17.1	5	720	144.1	17.1	10	1398	139.8	17.1	25	3548	141.9	141.9	1.5%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOWS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SCIL GAS CALIBRATION CURVE QUALITY CONTROL STANDARD REPORT

DATE: 12/07/94, FREON 11, FREON 12 11/05/94, VINYL CHLORIDE, AND CHLOROETHANE 08/04/94

SUPPLY SOURCE: CHEMSERVE HVOC/AVOC MIX 7/1/94 LOT# 105-31A & 110-83B

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	907.8	10	7.4	9867	986.7	8.7%
CHLOROFORM	HALL	712.1	10	6.8	7750	775.0	8.8%
DICHLORO ETHANE (11)	HALL	539.1	10	5.4	5461	546.1	1.3%
DICHLORO ETHANE (12)	HALL	581.5	10	7.8	5984	598.4	2.9%
DICHLORO ETHENE (11)	PID	43.1	10	3.7	429	42.9	0.4%
DICHLORO ETHENE (12 CIS)	PID	66.6	10	6.2	670	67.0	0.6%
DICHLORO ETHENE (12 TRANS)	PID	112.4	10	4.8	1139	113.9	1.3%
DICHLOROMETHANE	HALL	251.7	10	4.4	2988	298.8	18.7%
TetraCHLORO ETHANE (1112)	HALL	773.7	10	15.7	7316	731.6	5.4%
TetraCHLORO ETHANE (1122)	HALL	625.2	10	15.2	6728	672.8	7.6%
TetraCHLORO ETHENE	PID	74.3	10	13.1	765	76.5	3.0%
TrichLORO ETHANE (111)	HALL	652.1	10	7.1	7351	735.1	12.7%
TrichLORO ETHANE (111)	PID	0.263	2000	2.0	532	0.266	1.2%
TrichLORO ETHANE (112)	HALL	539.7	10	12.8	5695	569.5	5.5%
TrichLORO ETHENE	PID	84.6	10	9.0	862	86.2	1.9%
FREON 12	HALL	886.9	8	2.2	7540	942.5	6.3%
FREON 11	HALL	1549.4	10	3.3	13806	1380.6	10.9%
FREON 113	HALL	329.7	20	3.8	5934	296.7	10.0%
VINYL CHLORIDE	HALL	196.6	25	2.4	4820	192.8	1.9%
CHLOROETHANE	HALL	54.3	10	2.8	573	57.3	5.6%
BENZENE	PID	143.7	10	7.7	1465	146.5	2.0%
CHLOROBENZENE	PID	164.3	10	15.4	1630	163.0	0.8%
ETHYLBENZENE	PID	136.4	10	15.7	1395	139.5	2.3%
TOLUENE	PID	145.2	10	11.6	1465	146.5	0.9%
m,p-XYLENES	PID	154.4	20	16.0	3184	159.2	3.2%
o-XYLENES	PID	141.9	10	17.1	1417	141.7	0.1%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE PREPARATION DATE: 11/22/94, FREONS 11, 12, VINYL CHLORIDE, CHLOROETHANE 09/14/94

LAB: TEG CRUISEMASTER
INSTRUMENT: GC14-RIGHT

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				AVE RF		%RSD
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF			
CARBON TETRACHLORIDE	HALL	6.1	5	2787	557.3	6.1	10	5549	554.9	6.1	25	13877	555.1	555.8	0.2%	
CHLOROFORM	HALL	5.6	5	2165	432.9	5.6	10	4346	434.6	5.6	25	12456	498.2	455.3	8.2%	
DICHLOROMETHANE	HALL	3.5	5	2379	475.9	3.5	10	4523	452.3	3.5	25	11908	476.3	468.2	2.9%	
1,1 DICHLORO ETHANE	HALL	4.4	5	2299	459.9	4.4	10	4388	438.8	4.4	25	11041	441.6	446.8	2.6%	
1,2 DICHLORO ETHANE	HALL	6.5	5	3286	657.2	6.5	10	5839	583.9	6.5	25	13996	559.9	600.3	8.4%	
1,1 DICHLORO ETHENE	PID	2.9	5	26	5.2	3.0	10	49	4.9	2.9	25	108	4.3	4.8	9.3%	
Cis 1,2 DICHLORO ETHENE	PID	5.1	5	35	7.0	5.1	10	66	6.6	5.1	25	154	6.1	6.6	6.7%	
Tr 1,2 DICHLORO ETHENE	PID	3.8	5	55	11.0	3.8	10	109	10.9	3.8	25	232	9.3	10.4	9.1%	
TETRACHLORO ETHANE (1112)	HALL	13.9	5	2684	536.8	13.9	10	5544	554.4	13.8	25	12844	513.8	535.0	3.8%	
TETRACHLORO ETHANE (1122)	HALL	17.4	5	2287	457.5	17.3	10	4933	493.3	17.3	25	12296	491.8	480.9	4.2%	
TETRACHLORO ETHENE	PID	11.4	5	35	7.1	11.4	10	67	6.7	11.4	25	154	6.2	6.6	6.9%	
1,1,1 TRICHLORO ETHANE	HALL	5.9	5	2157	431.3	5.9	10	4233	423.3	5.9	25	11450	458.0	437.5	4.2%	
1,1,1 TRICHLORO ETHANE	PID	3.5	500	76	0.153	3.5	2500	477	0.191	3.5	10000	1739	0.174	0.173	11.0%	
1,1,2 TRICHLORO ETHANE	HALL	11.2	5	1590	318.1	11.2	10	3445	344.5	11.2	25	9473	378.9	347.2	8.8%	
TRICHLORO ETHENE	PID	7.5	5	40	8.0	7.5	10	76	7.6	7.5	25	176	7.0	7.5	6.1%	
VINYL CHLORIDE	HALL	2.0	5	808	161.5	1.9	25	3612	144.5	1.9	50	7404	148.1	151.4	5.9%	
FREON 11	HALL	2.6	5	1500	300.0	2.6	25	6051	242.0	2.6	50.0	9925	198.5	246.8	20.6%	
FREON 12	HALL	1.6	5	823	164.6	1.6	25	3882	155.3	1.6	50.0	7202	144.0	154.6	6.7%	
FREON 113	HALL	3.0	10	1855	185.5	3.0	20	4902	245.1	3.0	50	12504	250.1	226.9	15.8%	
CHLOROETHANE	HALL	2.4	5	417	83.5	2.3	10	658	65.8	2.3	50.0	2577	51.5	66.9	23.9%	
BENZENE	PID	6.4	5	70	14.0	6.4	10	136	13.6	6.4	25	297	11.9	13.2	8.5%	
CHLOROBENZENE	PID	13.5	5	82	16.4	13.5	10	156	15.6	13.5	25	331	13.2	15.1	10.9%	
ETHYLBENZENE	PID	13.9	5	70	13.9	13.9	10	132	13.2	13.9	25	290	11.6	12.9	9.3%	
TOLUENE	PID	10.1	5	69	13.7	10.1	10	130	13.0	10.1	25	284	11.4	12.7	9.6%	
m,p-XYLENES	PID	14.2	10	151	15.1	14.2	20	283	14.2	14.2	50	648	13.0	14.1	7.7%	
o-XYLENES	PID	15.3	5	65	13.1	15.3	10	126	12.6	15.3	25	282	11.3	12.3	7.6%	

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS CALIBRATION CURVE QUALITY CONTROL STANDARD REPORT

DATE: 11/22/94, FREONS 11412, VINYL CHLORIDE, CHLOROETHANE 09/14/94
SUPPLY SOURCE: CHEMSERVE HVOC/AVOC MIX 7/1/94 LOT# 105-31A & 110-93B
INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	555.8	10	6.1	5666	566.6	1.9%
CHLOROFORM	HALL	455.3	10	5.6	4739	473.9	4.1%
DICHLORO ETHANE (11)	HALL	446.8	10	4.4	4667	466.7	4.5%
DICHLORO ETHANE (12)	HALL	600.3	10	6.5	5813	581.3	3.2%
DICHLORO ETHENE (11)	PID	4.8	10	3.0	46	4.6	5.0%
DICHLORO ETHENE (12 CIS)	PID	6.6	10	5.1	63	6.3	4.0%
DICHLORO ETHENE (12 TRANS)	PID	10.4	10	3.8	102	10.2	2.0%
DICHLOROMETHANE	HALL	468.2	10	3.5	4826	482.6	3.1%
TETRACHLORO ETHANE (1112)	HALL	535.0	10	13.9	5305	530.5	0.6%
TETRACHLORO ETHANE (1122)	HALL	480.9	10	17.4	4767	476.7	0.5%
TETRACHLORO ETHENE	PID	6.6	10	11.4	66	6.6	0.6%
TRICHLORO ETHANE (111)	HALL	437.5	10	5.9	4522	452.2	3.4%
TRICHLORO ETHANE (112)	HALL	347.2	10	11.2	3175	317.5	8.5%
TRICHLORO ETHENE	PID	7.5	10	7.5	76	7.6	1.0%
FREON 11	HALL	246.8	25	2.6	5724	229.0	7.2%
FREON 12	HALL	154.6	21	1.7	3015	143.6	7.1%
FREON 113	HALL	226.9	20	3.0	4995	249.7	10.1%
VINYL CHLORIDE	HALL	151.4	25	1.9	3951	158.0	4.4%
CHLOROETHANE	HALL	66.9	10	2.3	717	71.7	7.2%
BENZENE	PID	13.2	10	6.4	128	12.8	3.1%
CHLOROBENZENE	PID	15.1	10	13.5	148	14.8	2.3%
ETHYLBENZENE	PID	12.9	10	13.9	125	12.5	3.5%
TOLUENE	PID	12.7	10	10.1	125	12.5	1.5%
m&p-XYLENES	PID	14.1	20	14.2	274	13.7	3.0%
o-XYLENES	PID	12.3	10	15.3	123	12.3	0.4%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



ANALYTICAL PROCEDURES

The following text gives a brief summary of the analytical procedures used. Detailed descriptions are available upon request.

SAMPLE PREPARATION

Waters

Waters are prepared for TPH analysis (gasoline and diesel) and aromatic hydrocarbon analysis (BTEX) by either liquid-liquid extraction with freon 113 using a modified EPA Method 3510 or by purge & trap using EPA method 5030. For volatile chlorinated hydrocarbons, water samples are prepared by purge & trap following EPA Method 5030.

Soils

Soil samples are extracted with methanol for volatile chlorinated hydrocarbon compounds (EPA 8010) and with freon 113 for volatile aromatic hydrocarbon compounds (EPA 8020) and fuel compounds (DOHS approved EPA 8015m) by liquid-solid extraction using a modified EPA method 3550.

GAS CHROMATOGRAPHY

Volatile Chlorinated Hydrocarbons

Water samples and soil extracts are purged in a Tekmar LSC-2000 purge & trap, and backflushed into a Shimadzu 14A gas chromatograph equipped with megabore capillary columns and photoionization detector (PID) and Hall electrolytic detectors following EPA Methods 601/8010 and 602/8020.

Volatile Aromatic Hydrocarbons (BTEX) & Total Fuel Hydrocarbons (TPH)

An aliquot of the soil extract is injected on-column into a Shimadzu gas chromatograph equipped with megabore capillary columns, photoionization (PID) and flame ionization detectors (FID).

TOTAL RECOVERABLE HYDROCARBONS

Extracts are scrubbed with silica gel and measured on a BUCK 404 Infrared Analyzer following EPA 418.1 protocols.

DATA ACQUISITION & PROCESSING

Data from the gas chromatographs are acquired by Peaksimple computer data acquisition system. Separate chromatograms are printed for each detector. The resulting chromatograms are inspected at the end of each run and the data entered into a spreadsheet for on-site processing and evaluation.



SOIL VAPOR SURVEY METHODOLOGY

Probe Construction

TEG's soil vapor probes are constructed of 5/8 inch outer diameter, stainless steel, equipped with a hardened, reverse-threaded steel tip. Nominal lengths are 6 feet although additional lengths may be added. An inert 1/8 inch polypropylene nylaflow tube runs down the center of the probe to sampling ports beneath the tip (refer to the attached figure).

Probe Insertion

The probe is driven into the ground by either an electric rotary hammer or with TEG's truck-mounted hydraulic/vibrational system. Once inserted to the desired depth, the probe is rotated 3 to 5 turns in a clockwise direction, which opens the tip and exposes the vapor sampling ports. This design prevents clogging of the sampling ports and cross-contamination from soils during insertion.

Gas Sampling

Soil vapor is withdrawn from the nylaflow tubing using a syringe connected via an on-off valve. The first 40 cc of gas are discarded to flush the dead volume of the probe and fill it with in-situ soil vapor. The next 20 cc of gas are withdrawn in a syringe, plugged, and immediately transferred to the mobile lab for analysis within 5 minutes of collection. Additional soil vapor may be collected and stored in gas-tight containers as desired.

Flushing & Decontamination Procedures

To minimize the potential for cross-contamination between sites, all probe parts are cleaned of excess dirt and moisture prior to insertion. The nylaflow tubing and sampling ports are flushed with hundreds of cc's of ambient air between samples. If water, dirt, or any material is observed in the tubing, the tubing is replaced with fresh tubing.

Analysis of Soil Vapor

To eliminate loss of gases during storage, collected gas samples are analyzed immediately after collection in TEG's state certified mobile laboratory. One cc of air is injected into a Shimadzu gas chromatograph equipped with megabore capillary columns and with flame ionization, HNU photoionization detector (10.2 ev lamp), and Hall electrolytic conductivity detectors (Tracor model 1000). These detectors enable on-site analysis for landfill hydrocarbons, petroleum hydrocarbons, volatile aromatics (BTEX), and volatile chlorinated compounds (DCE, TCE, PCE, DCA, TCA, PCA) using EPA approved analytical methodology outlined in methods 8010, 8015, & 8020. Output signals from each detector are processed by HP3393A computing integrators or computer chromatography software and the results entered into a laboratory computer for on-site processing and graphing.

Transglobal Environmental Geochemistry

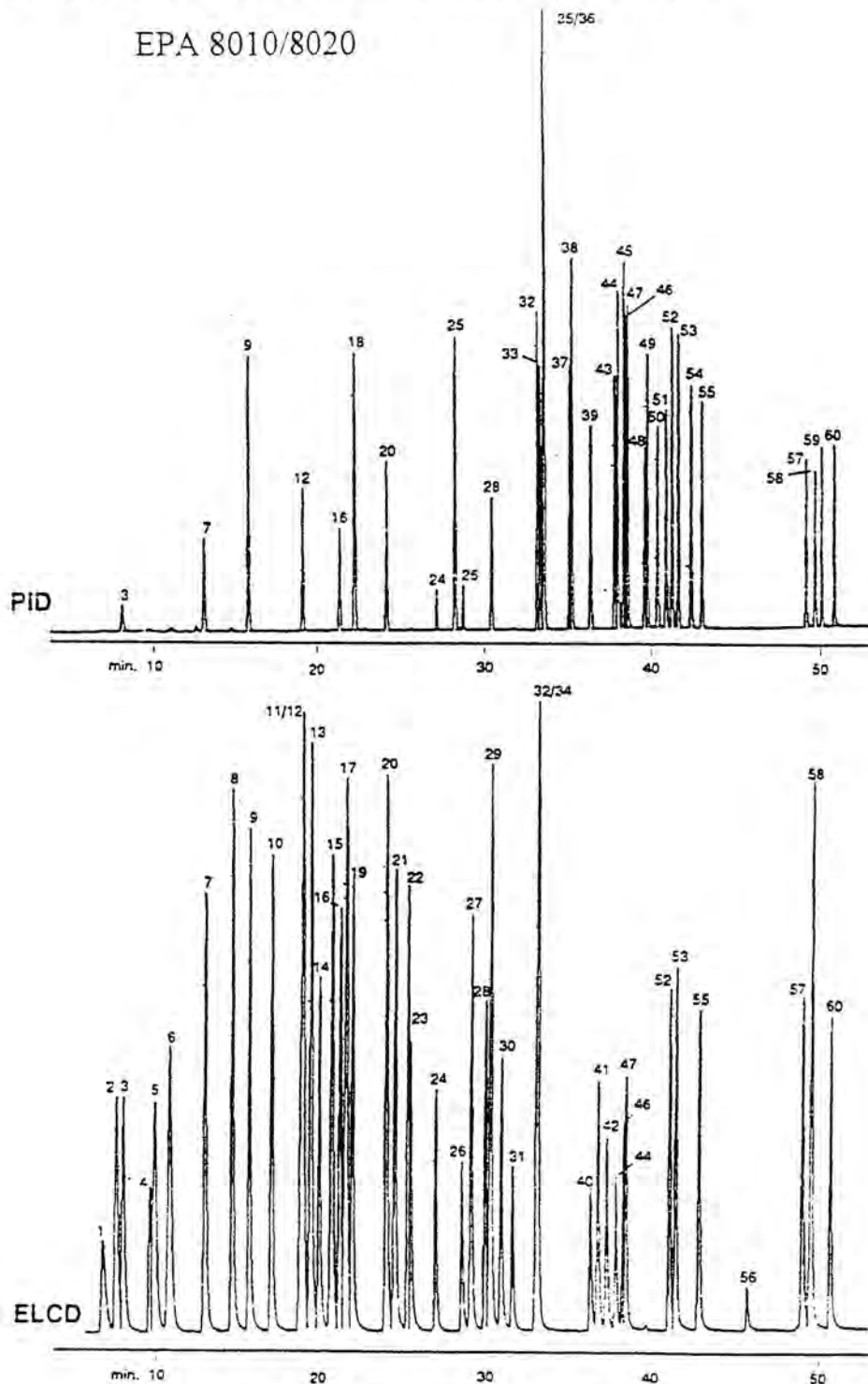
432 N. Cedros Ave., Solana Beach CA 92075 Ph: (619) 793-0401 Fax: (619) 793-0404



HALOGENATED & AROMATIC VOLATILE HYDROCARBONS

EPA 8010/8020

- 1 dichlorodifluoromethane
- 2 chloromethane
- 3 vinyl chloride
- 4 bromomethane
- 5 chloroethane
- 6 trichlorofluoromethane
- 7 1,1-dichloroethene
- 8 methylene chloride
- 9 trans-1,2-dichloroethene
- 10 1,1-dichloroethane
- 11 2,2-dichloropropane
- 12 cis-1,2-dichloroethene
- 13 chloroform
- 14 bromochloromethane
- 15 1,1,1-trichloroethane
- 16 1,1-dichloropropane
- 17 carbon tetrachloride
- 18 benzene
- 19 1,2-dichloroethane
- 20 trichloroethene
- 21 1,2-dichloropropane
- 22 bromodichloromethane
- 23 dibromomethane
- 24 cis-1,3-dichloropropene
- 25 toluene
- 26 trans-1,3-dichloropropene
- 27 1,1,2-trichloroethane
- 28 tetrachloroethene
- 29 1,3-dichloropropane
- 30 dibromochloromethane
- 31 1,2-dibromoethane
- 32 chlorobenzene
- 33 ethyl benzene
- 34 1,1,1,2-tetrachloroethane
- 35 *m*-xylene
- 36 *p*-xylene
- 37 *o*-xylene
- 38 styrene
- 39 isopropyl benzene
- 40 bromoform
- 41 1,1,2,2-tetrachloroethane
- 42 1,2,3-trichloropropane
- 43 *n*-propyl benzene
- 44 bromobenzene
- 45 1,3,5-trimethylbenzene
- 46 2-chlorotoluene
- 47 4-chlorotoluene
- 48 *tert*-butylbenzene
- 49 1,2,4-trimethylbenzene
- 50 *sec*-butylbenzene
- 51 *p*-isopropyltoluene
- 52 1,3-dichlorobenzene
- 53 1,4-dichlorobenzene
- 54 *n*-butylbenzene
- 55 1,2-dichlorobenzene
- 56 1,2-dibromo-3-chloropropane
- 57 1,2,4-trichlorobenzene
- 58 hexachlorobutadiene
- 59 naphthalene
- 60 1,2,3-trichlorobenzene

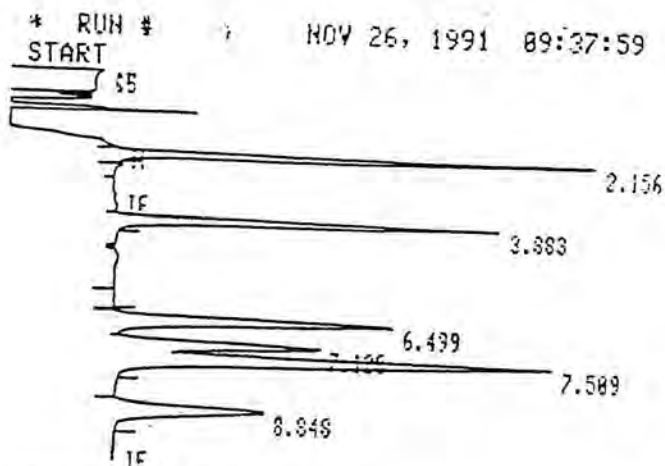


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VOLATILE AROMATIC HYDROCARBONS (EPA 602/8020)



TIMETABLE STOP

Closing signal file M:SIGNAL .BNC

RUN# 4 NOV 26, 1991 09:37:59

SIGNAL FILE: M:SIGNAL.BNC

EPA8020M

ESTD

RT	TYPE	AREA	WIDTH	HEIGHT
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3.883	PS	366094	.137	44456
6.499	BB	397750	.200	32291
7.128	BB	288464	.178	19467
7.589	BB	545349	.200	45373
8.848	BB	278847	.265	17522

RT	CAL#	PPM	SOIL	NAME
2.156	1R	1.195		BENZENE
3.883	2R	1.221		TOLUENE
6.499	3R	1.201		CHLOROBENZ
7.128	4R	1.232		ETHYLBENZ
7.589	5R	2.342		M&P XYLENE
8.848	6R	1.250		O XYLENE

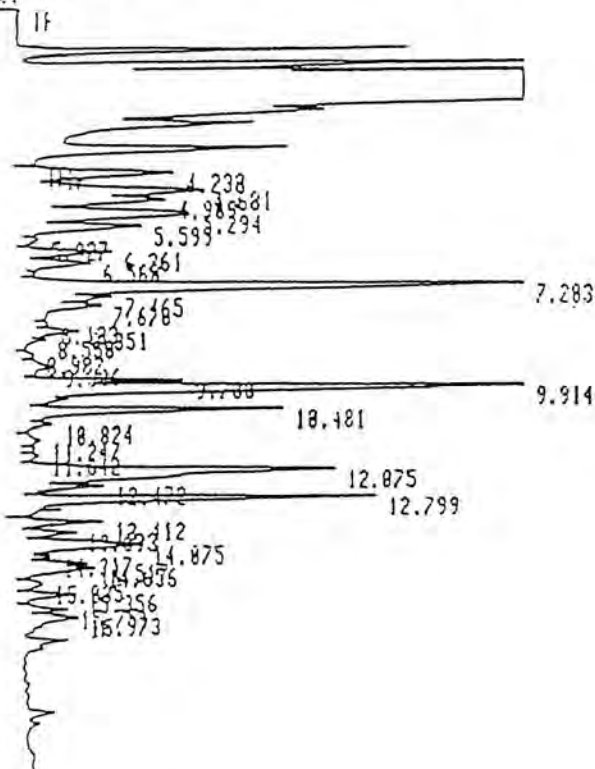
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MUL FACTOR=1.0030E+00



TOTAL PETROLEUM HYDROCARBONS (EPA 8015m)

GASOLINE

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START



STOP

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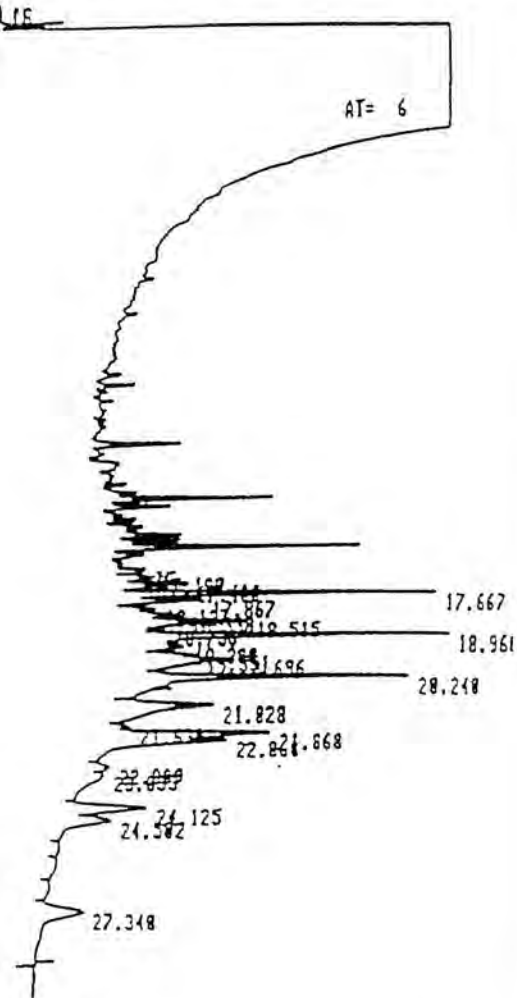
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EPA METHOD 8015

DIESEL

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START



TIMETABLE STOP

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RUN# 6 SEP 11, 1998 14:15:03

APPENDIX B
TEG REPORT NO. 941220T3
DECEMBER 28, 1994



December 28, 1994

Mr. Seyed Mortazavi
Hydrologue, Inc.
1155 East Green Street
Pasadena, CA 91106

**SUBJECT: DATA REPORT - SOIL VAPOR SURVEY - ALLIED SIGNAL, 11600
SHERMAN WAY, NORTH HOLLYWOOD, CA - HYDROLOGUE
PROJECT #1131-00**

TEG Project #941220T3

Mr. Mortazavi:

Please find enclosed a data report for the soil vapor survey conducted by TEG at the above referenced site for Hydrologue. Soil vapor was collected by TEG and analyzed on-site in TEG's DOHS certified mobile laboratory (CERT #1317). TEG personnel analyzed soil vapor from 48 points for:

- volatile halogenated hydrocarbons by EPA Method 8010
- volatile aromatic hydrocarbons (BTEX) by EPA Method 8020
- total petroleum hydrocarbons (TPH) by DOHS Modified EPA Method 8015
- Fixed Gases
- Acetone

The results of the analyses are summarized in the attached tables. Also enclosed are brief descriptions of TEG's soil vapor procedure and standard chromatograms of the analyses performed on the samples.

TEG appreciates the opportunity to provide analytical services to Hydrologue for this project. If you have any questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Dr. Blayne Hartman



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #94122013

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	GW-9	GW-9	GW-10	GW-10	GW-10	MLG-1	MLG-1	MLG-1	MLG-1 dup	MLG-1 dup	MLG-1
DATE	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94
COLLECTION TIME	08:00	08:24	08:47	14:40	14:40	09:18	09:42	10:05	10:25	10:47	11:13
ANALYSIS TIME	08:04	08:27	08:50	14:43	15:06	09:21	09:45	10:08	10:28	10:53	11:15
SAMPLING DEPTH (feet)	50	150	50	150	150	50	100	100	100	100	150
VOLUME WITHDRAWN (cc)	1.4	13.0	1.4	13	13	6	16	16	16	16	54
VOLUME INJECTED (cc)	1	1	1	1	1	1	1	0.017	1	0.017	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
CHLOROETHANE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
CHLOROFORM	nd	nd	nd	1.7	--	nd	nd	--	1.1	--	30.6
DICHLORODIFLUORO METHANE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
DICHLORO ETHANE (11)	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
DICHLORO ETHANE (12)	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
DICHLORO ETHENE (11)	6.2	45.7	nd	2.0	--	nd	nd	--	nd	--	nd
DICHLORO ETHENE (12 Cis)	nd	nd	nd	1.7	--	nd	9.2	--	12.4	--	10.8
DICHLORO ETHENE (12 Trans)	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
DICHLORO METHANE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
Tetrachloro ETHANE (1112)	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
Tetrachloro ETHANE (1122)	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
Tetrachloro ETHENE	4.4	10.1	2.3	nd	--	nd	nd	--	nd	--	nd
Trichloro ETHANE (111)	3.1	18.5	1.2	2.1	--	nd	nd	--	nd	--	nd
Trichloro ETHANE (112)	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
Trichloro ETHENE	2.4	12.1	3.4	>60	331**	32.2	>60	1,066*	>60	1,175*	>60
Trichlorofluoro METHANE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
Trichlorotrifluoro ETHANE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
VINYL CHLORIDE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
BENZENE	nd	nd	nd	nd	--	nd	nd	--	nd	--	nd
TOLUENE	nd	nd	nd	nd	--	nd	15.2	--	17.8	--	18.7
ETHYLBENZENE	nd	nd	nd	nd	--	nd	nd	--	nd	--	1.1
TOTAL XYLENES	nd	nd	nd	nd	--	nd	3.1	--	3.7	--	4.8
ACETONE	nd	nd	nd	nd	nd	nd	nd	--	nd	--	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TBG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

SOIL VAPOR DATA IN UG/L-VAPOR

	MLG-1	MLG-1	MLG-1	GW-7	GW-7	GW-7	GW-7	MLG-3	MLG-3	MLG-3	MLG-2
DATE	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94	12/21/94
COLLECTION TIME	11:13	11:54	11:54	13:00	13:25	13:42	14:05	15:53	16:14	16:14	16:56
ANALYSIS TIME	11:36	11:58	12:20	13:01	13:25	13:45	14:08	15:55	16:19	16:41	17:00
SAMPLING DEPTH (feet)	150	200	200	50	50	150	150	150	200.0	200	50
VOLUME WITHDRAWN (cc)	54	96	96	1.4	1.4	13	13	54	96.0	96	6
VOLUME INJECTED (cc)	0.017	1	0.017	1	0.1	1	0.1	1	1.0	1	1
CARBON TETRACHLORIDE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
CHLOROETHANE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
CHLOROPFORM	--	16.0	--	nd	--	nd	--	nd	nd	--	nd
DICHLORODIFLUORO METHANE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
DICHLORO ETHANE (11)	--	1.2	--	nd	--	2.3	--	4.9	11.5	--	nd
DICHLORO ETHANE (12)	--	nd	--	nd	--	nd	--	nd	nd	--	nd
DICHLORO ETHENE (11)	--	12.2	--	nd	--	5.7	--	5.5	14.7	--	nd
DICHLORO ETHENE (12 Cis)	--	7.1	--	nd	--	nd	--	nd	2.2	--	nd
DICHLORO ETHENE (12 Trans)	--	nd	--	nd	--	nd	--	nd	nd	--	nd
DICHLORO METHANE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
Tetrachloro ETHANE (1112)	--	nd	--	nd	--	nd	--	nd	nd	--	nd
Tetrachloro ETHANE (1122)	--	nd	--	nd	--	nd	--	nd	nd	--	nd
Tetrachloro ETHENE	--	2.5	--	1.3	--	3.3	--	nd	1.5	--	nd
Trichloro ETHANE (111)	--	16.2	--	1.5	--	7.4	--	7.1	30.9	--	1.4
Trichloro ETHANE (112)	--	nd	--	nd	--	nd	--	nd	nd	--	nd
Trichloro ETHENE	1,417*	>60	593*	>60	65**	>60	234**	9.9	>60	108**	12.7
Trichlorofluoro METHANE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
Trichlorotrifluoro ETHANE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
VINYL CHLORIDE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
BENZENE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
TOLUENE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
ETHYLBENZENE	--	nd	--	nd	--	nd	--	nd	nd	--	nd
TOTAL XYLENES	--	nd	--	nd	--	nd	--	nd	nd	--	nd
ACETONE	--	nd	--	nd	--	nd	--	nd	nd	--	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	MLG-2	BLANK	MLG-2	MLG-2	MLG-2	MLG-7	MLG-7	MLG-7	MLG-7	MLG-4	MLG-4
DATE	12/21/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94
COLLECTION TIME	17:17	07:02	07:23	07:47	08:07	08:27	08:48	09:16	09:37	10:02	11:17
ANALYSIS TIME	17:23	07:04	07:26	07:50	08:11	08:28	08:52	09:19	09:41	10:04	11:21
SAMPLING DEPTH (feet)	100	--	150	200	200	50	100	150	200	50	100
VOLUME WITHDRAWN (cc)	16	0.06	54	96	96	6	16	54	96	6	16
VOLUME INJECTED (cc)	1	1	1	1	0.1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
CHLOROETHANE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
DICHLORODIFLUORO METHANE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (11)	1.3	nd	1.7	3.0	--	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (12)	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (11)	3.1	nd	4.3	10.0	--	nd	nd	nd	nd	nd	14.7
DICHLORO ETHENE (12 Cis)	nd	nd	nd	3.6	--	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (12 Trans)	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
DICHLORO METHANE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHANE (1112)	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHANE (1122)	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHENE	1.5	nd	nd	1.2	--	nd	nd	nd	nd	nd	nd
TrichLORO ETHANE (111)	3.2	nd	3.6	11.3	--	nd	nd	1.2	nd	1.7	18.8
TrichLORO ETHANE (112)	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TrichLORO ETHENE	11.0	nd	6.6	>60	67**	7.2	2.3	3.9	4.8	3.3	7.2
TrichLOROFLUORO METHANE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TrichLOROTrifluORO ETHANE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	nd	nd	--	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)
ANALYSES PERFORMED BY: MR. JOHN SCHOLL
DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	MLG-4	MLG-4	MLG-10A	MLG-10A	MLG-10A	MLG-10A	MLG-5	MLG-5	MLG-5	MLG-5	MLG 2 dup
DATE	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94	12/22/94
COLLECTION TIME	10:48	11:47	12:12	12:33	13:01	13:24	13:47	14:12	14:38	15:08	15:33
ANALYSIS TIME	10:57	11:50	12:14	12:38	13:03	13:26	13:49	14:14	14:40	15:11	15:35
SAMPLING DEPTH (feet)	150	200	50	100	150	200	50	100	150	200	200
VOLUME WITHDRAWN (cc)	54	96	6	16	54	96	6	16	54	96	96
VOLUME INJECTED (cc)	1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUORO METHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (11)	nd	nd	nd	nd	nd	nd	nd	1.7	nd	nd	3.5
DICHLORO ETHANE (12)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (11)	14.1	14.1	nd	6.5	nd	2.3	2.9	15.4	5.9	nd	11.2
DICHLORO ETHENE (12 Cis)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.4
DICHLORO ETHENE (12 Trans)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO METHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHANE (1112)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHANE (1122)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.7
Trichloro ETHANE (111)	9.3	10.4	nd	4.6	nd	1.7	4.8	21.4	7.6	1.4	12.7
Trichloro ETHANE (112)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichloro ETHENE	16.0	35.5	3.0	2.9	1.5	3.6	1.1	1.2	1.1	nd	>60
Trichlorofluoro METHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichlorotrifluoro ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	MLG-6	MLG-6	MLG-6	MLG-6	MLG-3	MLG-3	MLG-3 dup	BLANK	GW-8	GW-8
DATE	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/21/94	12/21/94	12/21/94
COLLECTION TIME	10:18	13:24	14:16	13:52	12:09	16:09	16:33	16:57	06:10	07:30	15:28
ANALYSIS TIME	10:18	13:24	14:17	13:52	12:09	16:09	16:34	16:58	06:13	07:32	15:30
SAMPLING DEPTH (feet)	--	50	100	150	200	50	100	100	--	50	150
VOLUME WITHDRAWN (cc)	0.06	18	16	54	120	6	16	16	0.06	1.4	13
VOLUME INJECTED (cc)	1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUORO METHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (11)	nd	nd	1.7	2.5	3.3	nd	3.0	2.7	nd	nd	nd
DICHLORO ETHANE (12)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (11)	nd	nd	18.5	22.3	16.2	nd	4.4	4.7	nd	2.4	nd
DICHLORO ETHENE (12 Cis)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (12 Trans)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO METHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHANE (1112)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHANE (1122)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHENE	nd	nd	1.1	1.2	1.3	1.4	1.9	1.6	nd	nd	nd
TrichLORO ETHANE (111)	nd	4.4	24.7	22.4	19.0	1.8	4.9	4.2	nd	nd	nd
TrichLORO ETHANE (112)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TrichLORO ETHENE	nd	nd	7.2	21.5	58.0	1.8	7.3	7.3	nd	2.0	15.2
TrichLOROFLUORO METHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TrichLOROTrifLUORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	MLG-2 dup	BLANK	MLG-9	MLG-9	MLG-9	MLG-9	MLG-8	MLG-8	MLG-8	MLG-8	MLG-8 dup
DATE	12/22/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94
COLLECTION TIME	15:33	07:12	07:36	07:58	08:23	08:45	09:07	09:30	09:52	10:16	10:38
ANALYSIS TIME	15:53	07:17	07:39	08:02	08:26	08:48	09:10	09:32	09:55	10:18	10:41
SAMPLING DEPTH (feet)	200	--	50	100	150	200	50	100	150	200	200
VOLUME WITHDRAWN (cc)	96	0.06	6	16	54	96	6	16	54	96	96
VOLUME INJECTED (cc)	0.1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	--	nd	nd	nd	nd	nd	nd	nd	nd	2.6	3.0
CHLOROETHANE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORODIFLUORO METHANE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (11)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (12)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (11)	--	nd	nd	nd	nd	nd	nd	6.6	7.7	9.1	10.8
DICHLORO ETHENE (12 Cis)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (12 Trans)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLORO METHANE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHANE (1112)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHANE (1122)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloro ETHENE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichloro ETHANE (111)	--	nd	nd	nd	nd	nd	nd	4.1	6.4	2.8	3.8
Trichloro ETHANE (112)	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichloro ETHENE	118**	nd	nd	nd	nd	nd	nd	1.0	6.4	22.0	26.3
Trichlorofluoro METHANE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichlorotrifluoro ETHANE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
VINYL CHLORIDE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
BENZENE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

TPH (DOHS Mod. EPA Method 8015) & FIXED GASES ANALYSES OF SOIL VAPOR

SAMPLE NUMBER	PURGE VOLUMES	DATE ANALYZED	TPH (ppmv)	OXYGEN (%)	CARBON DIOXIDE (%)
BLANK		12/20/94	ND	--	--
MLG 6 @ 50'	1	12/20/94	1.7	--	--
MLG 6 @ 50'	2	12/20/94	1.7	--	--
MLG 6 @ 50'	3	12/20/94	1.4	--	--
MLG 6 @ 50'	6	12/20/94	1.5	--	--
MLG 6 @ 50'	9	12/20/94	1.2	14.6	2.240
MLG 6 @ 100'	6	12/20/94	12.0	17.5	3.171
MLG 6 @ 150'	9	12/20/94	12.6	17.0	1.719
MLG 6 @ 200'	1	12/20/94	11.7	--	--
MLG 6 @ 200'	2	12/20/94	17.6	--	--
MLG 6 @ 200'	3	12/20/94	21.0	--	--
MLG 6 @ 200'	6	12/20/94	20.6	--	--
MLG 6 @ 200'	9	12/20/94	22.5	--	--
MLG 6 @ 200'	12	12/20/94	23.5	--	--
MLG 6 @ 200'	15	12/20/94	15.5	13.1	1.866
MGL 3 @ 50'	3	12/20/94	2.8	14.0	0.392
MGL 3 @ 100'	6	12/20/94	3.4	19.2	2.463
MGL 3 @ 100' dup	6	12/20/94	3.6	20.1	2.809
DETECTION LIMITS			1.0	1.0	0.010

ND INDICATES NOT DETECTED AT LISTED DETECTION LIMITS

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

TPH (DOHS Mod. EPA Method 8015) & FIXED GASES ANALYSES OF SOIL VAPOR

SAMPLE NUMBER	PURGE VOLUMES	DATE ANALYZED	TPH (ppmv)	OXYGEN (%)	CARBON DIOXIDE (%)
BLANK		12/21/94	ND	--	--
GW 8 @ 50'	3	12/21/94	1.5	18.9	2.537
GW 8 @ 150'	9	12/21/94	3.3	18.0	1.196
GW 9 @ 50'	3	12/21/94	3.7	19.6	2.147
GW 9 @ 150'	9	12/21/94	19.3	18.4	1.354
GW 10 @ 50'	3	12/21/94	1.5	12.9	7.868
GW 10 @ 150'	9	12/21/94	38.8	11.0	9.212
MLG 1 @ 50'	3	12/21/94	7.1	15.5	3.517
MLG 1 @ 100'	6	12/21/94	326.1	9.9	6.579
MLG 1 @ 100' dup	6	12/21/94	282.9	5.3	8.610
MLG 1 @ 150'	9	12/21/94	392.1	4.4	14.044
MLG 1 @ 200'	12	12/21/94	156.9	12.7	8.249
GW 7 @ 50'	3	12/21/94	11.4	13.3	6.747
GW 7 @ 150'	9	12/21/94	44.6	11.0	9.212
MLG 3 @ 150'	9	12/21/94	4.9	18.7	2.549
MLG 3 @ 200'	12	12/21/94	23.1	15.5	4.132
MLG 2 @ 50'	3	12/21/94	4.1	18.5	1.041
MLG 2 @ 100'	6	12/21/94	3.8	18.4	1.598
DETECTION LIMITS			1.0	1.0	0.010

ND INDICATES NOT DETECTED AT LISTED DETECTION LIMITS

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

TPH (DOHS Mod. EPA Method 8015) & FIXED GASES ANALYSES OF SOIL VAPOR

SAMPLE NUMBER	PURGE VOLUMES	DATE ANALYZED	TPH (ppmv)	OXYGEN (%)	CARBON DIOXIDE (%)
BLANK		12/22/94	ND	--	--
MGL 2 @ 150'	9	12/22/94	2.8	18.6	0.592
MGL 2 @ 200'	12	12/22/94	19.1	17.5	0.871
MGL 2 @ 200' dup	12	12/22/94	19.7	18.0	1.146
MGL 7 @ 50'	3	12/22/94	1.9	19.2	1.218
MGL 7 @ 100'	6	12/22/94	ND	17.1	0.215
MGL 7 @ 150'	9	12/22/94	1.9	18.6	0.146
MGL 7 @ 200'	12	12/22/94	1.7	17.6	0.152
MGL 4 @ 50'	3	12/22/94	ND	17.3	2.149
MGL 4 @ 100'	6	12/22/94	6.1	17.6	0.263
MGL 4 @ 150'	9	12/22/94	6.5	18.2	0.496
MGL 4 @ 200'	12	12/22/94	10.3	16.0	0.772
MGL 10A @ 50'	3	12/22/94	ND	20.2	0.076
MGL 10A @ 100'	6	12/22/94	2.7	19.8	0.061
MGL 10A @ 150'	9	12/22/94	ND	20.7	0.093
MGL 10A @ 200'	12	12/22/94	1.6	19.2	0.238
MGL 5 @ 50'	3	12/22/94	1.9	19.9	0.240
MGL 5 @ 100'	6	12/22/94	7.0	19.7	0.356
MGL 5 @ 150'	9	12/22/94	3.0	19.0	0.192
MGL 5 @ 200'	12	12/22/94	ND	19.8	0.518
DETECTION LIMITS			1.0	1.0	0.010

ND INDICATES NOT DETECTED AT LISTED DETECTION LIMITS

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



HYDROLOGUE PROJECT #1131-00

Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

TPH (DOHS Mod. EPA Method 8015) & FIXED GASES ANALYSES OF SOIL VAPOR

SAMPLE NUMBER	PURGE VOLUMES	DATE ANALYZED	TPH (ppmv)	OXYGEN (%)	CARBON DIOXIDE (%)
BLANK		12/23/94	ND	--	--
MLG 9 @ 50'	3	12/23/94	1.4	20.3	0.396
MLG 9 @ 100'	6	12/23/94	ND	19.2	1.064
MLG 9 @ 150'	9	12/23/94	ND	18.6	0.726
MLG 9 @ 200'	12	12/23/94	ND	19.3	0.540
MGL 8 @ 50'	3	12/23/94	ND	20.1	0.433
MGL 8 @ 100'	6	12/23/94	2.6	18.3	0.492
MGL 8 @ 150'	9	12/23/94	3.9	17.5	1.453
MGL 8 @ 200'	12	12/23/94	6.4	17.5	1.609
MGL 8 @ 200' dup	12	12/23/94	7.7	20.2	1.382
DETECTION LIMITS			1.0	1.0	0.010

ND INDICATES NOT DETECTED AT LISTED DETECTION LIMITS

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
12-30-94



CALIBRATION CURVE DATE: 11/28/94 (* 11/01/94)

LAB: TEG TIOGA 3
INSTRUMENT: GC14

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				SUMMARY		
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF	AVE RF	SD	%RSD
CARBON Tetrachloride	HALL	6.4	5	5491	1098.1	6.4	20	19450	972.5	6.4	40	40376	1009.4	1026.7	64.6	6.3%
CHLOROETHANE*	HALL	2.5	5	869	173.8	2.5	31	4809	155.1	2.5	63	13606	216.0	181.6	31.2	17.2%
CHLOROFORM	HALL	5.9	5	3975	795.0	5.9	20	14914	745.7	5.9	40	30026	750.7	763.8	27.2	3.6%
DICHLORODIFLUORO METHANE*	HALL	1.9	4	1559	389.8	1.8	26	7357	283.0	1.8	51	14560	285.5	319.4	60.9	19.1%
DICHLORO ETHANE (11)	HALL	4.6	5	3364	672.7	4.6	20	13199	659.9	4.6	40	27214	680.4	671.0	10.3	1.5%
DICHLORO ETHANE (12)	HALL	6.8	5	4573	914.5	6.8	20	15264	763.2	6.8	40	31156	778.9	818.9	83.2	10.2%
DICHLORO ETHENE (11)	PID	3.1	5	80	16.1	3.1	20	318	15.9	3.1	40	662	16.6	16.2	0.3	2.0%
DICHLORO ETHENE (12 Cis)	PID	5.3	5	139	27.7	5.3	20	492	24.6	5.3	40	1028	25.7	26.0	1.6	6.1%
DICHLORO ETHENE (12 Trans)	PID	4.0	5	209	41.9	4.0	20	808	40.4	4.0	40	1668	41.7	41.3	0.8	2.0%
DICHLORO METHANE	HALL	3.7	5	3247	649.4	3.7	20	13012	650.6	3.7	40	26006	650.2	650.1	0.6	0.1%
Tetrachloro ETHANE (1112)	HALL	14.1	5	4904	980.8	14.2	20	20833	1041.6	14.2	40	40692	1017.3	1013.2	30.6	3.0%
Tetrachloro ETHANE (1122)	HALL	17.6	5	5084	1016.8	17.6	20	18246	912.3	17.6	40	36520	913.0	947.4	60.2	6.4%
Tetrachloro ETHENE	PID	11.7	5	136	27.2	11.7	20	555	27.7	11.7	40	1089	27.2	27.4	0.3	1.1%
Trichloro ETHANE (111)	HALL	6.1	5	3909	781.7	6.1	20	16330	816.5	6.1	40	32318	807.9	802.1	18.1	2.3%
Trichloro ETHANE (112)	HALL	11.4	5	3864	772.8	11.5	20	14672	733.6	11.4	40	32738	818.5	774.9	42.5	5.5%
Trichloro ETHENE	PID	7.8	5	154	30.7	7.8	20	583	29.1	7.8	40	1222	30.5	30.1	0.9	2.9%
Trichlorofluoro METHANE*	HALL	2.8	5	2067	413.4	2.7	29	9769	336.9	2.8	58	20584	354.9	368.4	40.0	10.9%
Trichlorotrifluoro ETHANE	HALL	3.1	5	2207	441.5	3.1	20	8602	430.1	3.1	40	17158	428.9	433.5	6.9	1.6%
VINYL CHLORIDE*	PID	2.0	4	760	190.0	2.1	27	6108	226.2	2.1	55	13826	251.4	222.5	30.9	13.9%
BENZENE	PID	6.6	5	277	55.5	6.7	20	1038	51.9	6.7	40	2190	54.7	54.0	1.9	3.5%
CHLOROBENZENE	PID	13.8	5	299	59.9	13.9	20	1124	56.2	13.8	40	2298	57.5	57.8	1.9	3.2%
ETHYLBENZENE	PID	14.2	5	256	51.2	14.2	20	971	48.6	14.2	40	1957	48.9	49.6	1.4	2.9%
TOLUENE	PID	10.4	5	272	54.4	10.4	20	1017	50.9	10.4	40	2125	53.1	52.8	1.8	3.4%
m&p-XYLENES	PID	14.5	10	590	59.0	14.5	40	2211	55.3	14.5	80	4605	57.6	57.3	1.9	3.3%
o-XYLENES	PID	15.6	5	262	52.3	15.6	20	993	49.7	15.6	40	2034	50.9	50.9	1.3	2.6%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS INITIAL LCS REPORT

DATE: 11/28/94 (* 11/01/94)

SUPPLY SOURCE: CHEM-SERVE 8010/8020 MIX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TetraCHLORIDE	HALL	1026.7	20	6.4	20059	1002.9	2.3%
CHLOROETHANE*	HALL	181.6	20	2.5	3604	180.2	0.8%
CHLOROFORM	HALL	763.8	20	5.9	15720	786.0	2.9%
DICHLORODIFLUORO METHANE*	HALL	319.4	20	1.9	6510	325.5	1.9%
DICHLORO ETHANE (11)	HALL	671.0	20	4.6	13491	674.6	0.5%
DICHLORO ETHANE (12)	HALL	818.9	20	6.6	15284	764.2	6.7%
DICHLORO ETHENE (11)	PID	16.2	20	3.1	334	16.7	3.0%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.3	520	26.0	0.0%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	4.0	839	41.9	1.6%
DICHLORO METHANE	HALL	650.1	20	3.7	14196	709.8	9.2%
TetraCHLORO ETHANE (1112)	HALL	1013.2	20	14.2	22689	1134.5	12.0%
TetraCHLORO ETHANE (1122)	HALL	947.4	20	17.6	19816	990.8	4.6%
TetraCHLORO ETHENE	PID	27.4	20	11.7	557	27.8	1.6%
TrichLORO ETHANE (111)	HALL	802.1	20	6.1	15403	770.1	4.0%
TrichLORO ETHANE (112)	HALL	774.9	20	11.5	17589	879.4	13.5%
TrichLORO ETHENE	PID	30.1	20	7.8	621	31.0	3.1%
TrichLOROFLURO METHANE *	HALL	368.0	20	2.7	8380	419.0	13.9%
TrichLOROTriFLURO ETHANE	HALL	433.5	20	3.2	9951	497.6	14.8%
VINYL CHLORIDE*	HALL	222.0	26	2.1	5899	226.9	2.2%
BENZENE	PID	54.0	20	6.7	1100	55.0	1.8%
ETHYLBENZENE	PID	49.6	20	14.2	1015	50.9	2.7%
TOLUENE	PID	52.8	20	10.4	1068	54.4	3.1%
m&p-XYLENES	PID	57.3	40	14.5	2378	59.5	3.8%
o-XYLENES	PID	50.9	20	15.6	1058	52.9	3.9%

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE DATE: 12/20/94

LAB: TEG TIIGA 3
SOURCE: RECOCHEM
INSTRUMENT: GC14

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				SUMMARY		
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF	AVE RF	SD	%RSD
ACETONE	PID	3.3	5	142	28.4	3.3	20	531	26.5	3.2	50	1322	26.4	27.1	1.1	4.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)
ANALYSES PERFORMED BY: MR. JOHN SCHOLL
DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS INITIAL LCS REPORT

DATE: 12/20/94

SUPPLY SOURCE: CHEM-SERVE 8010/8020 MIX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
ACETONE	FID	27.1	20	3.2	556	27.8	2.6%

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY CALIBRATION STANDARD REPORT

DATE: 12/20/94

SUPPLY SOURCE: TEG 15 MIX & BTEX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
DICHLORO ETHANE (11)	HALL	671.0	20	4.8	15363	768.1	14.5%
DICHLORO ETHANE (12)	HALL	818.9	20	6.7	18145	907.2	10.8%
DICHLORO ETHENE (11)	PID	16.2	20	3.0	326	16.3	0.6%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.2	514	25.7	1.2%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	3.9	813	40.7	1.5%
TetraCHLORO ETHENE	PID	27.4	20	11.6	549	27.4	0.1%
TrichLORO ETHANE (111)	HALL	902.1	20	6.0	18426	921.3	14.9%
TrichLORO ETHANE (112)	HALL	774.9	20	11.4	17319	865.9	11.7%
TrichLORO ETHENE	PID	30.1	20	7.7	609	30.4	1.1%
BENZENE	PID	54.0	20	6.6	1085	54.3	0.5%
ETHYLBENZENE	PID	49.6	20	14.1	996	49.8	0.4%
TOLUENE	PID	52.8	20	10.3	1062	53.1	0.6%
m&p-KYLENES	PID	57.3	40	14.4	2302	57.6	0.4%
o-KYLENES	PID	50.9	20	15.5	1028	51.4	1.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1217)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY CALIBRATION STANDARD REPORT

DATE: 12/21/94

SUPPLY SOURCE: TEG 15 MIX & BTEX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CHLOROFORM	HALL	763.8	20	5.8	17292	864.6	13.2%
DICHLORO ETHANE (11)	HALL	671.0	20	4.5	14651	732.5	5.2%
DICHLORO ETHANE (12)	HALL	818.9	20	6.7	17568	883.4	7.9%
DICHLORO ETHENE (11)	PID	16.2	20	3.0	323	16.2	0.2%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.2	495	24.8	4.8%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	3.9	789	39.4	4.5%
TetraCHLORO ETHENE	PID	27.4	20	11.6	553	27.7	0.9%
Trichloro ETHANE (111)	HALL	802.1	20	6.0	18060	903.0	12.6%
Trichloro ETHANE (112)	HALL	774.9	20	11.3	17473	873.7	12.7%
Trichloro ETHENE	PID	38.1	20	7.7	589	29.4	2.2%
BENZENE	PID	54.0	20	6.6	1050	52.5	2.8%
ETHYLBENZENE	PID	49.6	20	14.1	981	49.0	1.1%
TOLUENE	PID	52.8	20	10.3	1034	51.7	2.1%
m&p-XYLENES	PID	57.3	40	14.4	2272	56.8	0.9%
o-XYLENES	PID	50.9	20	15.5	1013	50.6	0.5%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY CALIBRATION STANDARD REPORT

DATE: 12/22/94

SUPPLY SOURCE: TEG 15 MIX & BTEX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
DICHLORO ETHANE (11)	HALL	671.0	20	4.5	12415	620.8	7.5%
DICHLORO ETHANE (12)	HALL	818.9	20	6.7	15711	785.6	4.1%
DICHLORO ETHENE (11)	PID	16.2	20	3.1	296	14.8	8.6%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.3	476	23.8	8.4%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	3.9	756	37.8	8.4%
TetraCHLORO ETHENE	PID	27.4	20	11.6	501	25.0	8.6%
TrichLORO ETHANE (111)	HALL	802.1	20	6.0	14381	719.0	10.4%
TrichLORO ETHANE (112)	HALL	774.9	20	11.4	15151	757.6	2.2%
TrachLORO ETHENE	PID	30.1	20	7.7	567	28.4	5.7%
BENZENE	PID	54.0	20	6.8	1011	50.6	6.4%
ETHYLBENZENE	PID	49.6	20	14.1	937	46.8	5.6%
TOLUENE	PID	52.8	20	10.3	993	49.6	6.0%
m&p-XYLENES	PID	57.3	40	14.4	2166	54.1	5.5%
o-XYLENES	PID	50.9	20	15.5	971	48.6	4.6%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY CALIBRATION STANDARD REPORT

DATE: 12/23/94

SUPPLY SOURCE: TEG 15 MIX & BTEX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TetraCHLORIDE	HALL	1026.7	20	6.3	20448	1022.4	0.4%
DICHLORO ETHANE (11)	HALL	671.0	20	4.5	14573	728.6	8.6%
DICHLORO ETHANE (12)	HALL	818.9	20	6.7	18490	924.5	12.9%
DICHLORO ETHENE (11)	PID	16.2	20	3.1	329	16.5	1.7%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.3	480	24.0	7.6%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	3.9	774	38.7	6.3%
TetraCHLORO ETHENE	PID	27.4	20	11.6	512	25.6	6.5%
TrichLORO ETHANE (111)	HALL	802.1	20	6.1	15034	751.7	6.3%
TrichLORO ETHANE (112)	HALL	774.9	20	11.4	14111	705.5	8.9%
TrichLORO ETHENE	PID	30.1	20	7.8	579	28.9	3.9%
BENZENE	PID	54.0	20	6.6	1036	51.8	4.2%
ETHYLBENZENE	PID	49.6	20	14.1	943	47.1	5.0%
TOLUENE	PID	52.8	20	10.4	1012	50.6	4.2%
m&p-XYLENES	PID	57.3	40	14.5	2182	54.6	4.8%
o-XYLENES	PID	50.9	20	15.5	987	49.4	3.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY LCS REPORT

DATE: 12/20/94

SUPPLY SOURCE: CHEM-SERVE 8010/8020 MIX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
DICHLORO ETHANE (11)	HALL	671.0	20	4.5	12710	635.5	5.3%
DICHLORO ETHANE (12)	HALL	818.9	20	6.7	16833	841.7	2.8%
DICHLORO ETHENE (11)	PID	16.2	20	3.0	272	13.7	15.7%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.2	441	22.0	15.3%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	3.9	705	35.3	14.6%
TetraCHLORO ETHENE	PID	27.4	20	11.6	476	23.8	13.2%
TrichLORO ETHANE (111)	HALL	802.1	20	6.0	16339	817.0	1.9%
TrichLORO ETHANE (112)	HALL	774.9	20	11.4	17312	865.6	11.7%
TrichLORO ETHENE	PID	30.1	20	7.7	525	26.2	12.8%
BENZENE	PID	54.0	20	6.6	944	47.2	12.6%
ETHYLBENZENE	PID	49.6	20	14.1	865	43.3	12.8%
TOLUENE	PID	52.8	20	10.3	919	46.0	12.9%
m&p-XYLENES	PID	57.3	40	14.4	2012	50.3	12.2%
o-XYLENES	PID	50.9	20	15.5	891	44.5	12.5%

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY LCS REPORT

DATE: 12/21/94

SUPPLY SOURCE: CHEM-SERVE 8010/8020 MIX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CHLOROFORM	HALL	763.8	20	5.8	16653	832.7	9.0%
DICHLORO ETHANE (11)	HALL	671.0	20	4.5	14854	742.7	10.7%
DICHLORO ETHANE (12)	HALL	818.9	20	6.7	16469	823.5	0.6%
DICHLORO ETHENE (11)	PID	16.2	20	3.1	285	14.3	11.9%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.3	461	23.1	11.3%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	3.9	738	36.9	10.7%
TetraCHLORO ETHENE	PID	27.4	20	11.7	496	24.8	9.5%
TRICHLORO ETHANE (111)	HALL	802.1	20	6.1	16660	833.0	3.8%
TRICHLORO ETHANE (112)	HALL	774.9	20	11.4	13885	694.2	10.4%
TRICHLORO ETHENE	PID	30.1	20	7.8	552	27.6	8.3%
BENZENE	PID	54.0	20	6.6	988	45.4	8.6%
ETHYLBENZENE	PID	49.6	20	14.2	901	45.0	9.2%
TOLUENE	PID	52.8	20	10.4	971	48.5	8.1%
m&p-XYLENES	PID	57.3	40	14.5	2094	52.4	8.6%
o-XYLENES	PID	50.9	20	15.6	950	47.5	6.7%

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY LCS REPORT

DATE: 12/22/94

SUPPLY SOURCE: CHEM-SERVE 8010/8020 MIX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	ADIFF
DICHLORO ETHANE (11)	HALL	671.0	20	4.6	15259	763.0	13.7%
DICHLORO ETHANE (12)	HALL	618.9	20	6.7	21013	1050.7	28.3%
DICHLORO ETHENE (11)	PID	16.2	20	3.1	305	15.2	6.0%
DICHLORO ETHENE (Cis 12)	PID	26.0	20	5.3	470	23.6	9.7%
DICHLORO ETHENE (Trans 12)	PID	41.3	20	4.0	746	37.3	9.7%
TETRACHLORO ETHENE	PID	27.4	20	11.7	503	25.1	8.2%
TRICHLORO ETHANE (111)	HALL	602.1	20	6.1	17832	891.6	11.2%
TRICHLORO ETHANE (112)	HALL	774.9	20	11.4	15322	766.1	1.1%
TRICHLORO ETHENE	PID	30.1	20	7.8	566	28.3	6.0%
BENZENE	PID	54.0	20	6.6	1004	50.2	7.1%
ETHYLBENZENE	PID	49.6	20	14.2	931	46.5	6.2%
TOLUENE	PID	52.8	20	10.4	992	49.6	6.1%
m&p-XYLENES	PID	57.3	40	14.5	2156	53.9	5.9%
o-XYLENES	PID	50.9	20	15.6	975	48.7	4.3%

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY LCS REPORT

DATE: 12/23/94

SUPPLY SOURCE: CHEM-SERVE 8010/8020 MIX

INSTRUMENT: TIOGA 3 SHIMADZU GC14A

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON Tetrachloride	HALL	1026.7	20	6.3	22217	1110.8	8.2%
Dichloro ETHANE (11)	HALL	671.0	20	4.5	15793	789.6	17.7%
Dichloro ETHANE (12)	HALL	618.9	20	6.7	20179	1008.9	23.2%
Dichloro ETHENE (11)	PID	16.2	20	3.1	305	15.3	5.7%
Dichloro ETHENE (Cis 12)	PID	26.0	20	5.3	452	22.6	13.1%
Dichloro ETHENE (Trans 12)	PID	41.3	20	3.9	731	36.6	11.5%
TetraChloro ETHENE	PID	27.4	20	12.7	464	24.2	11.7%
Trichloro ETHANE (111)	HALL	802.1	20	6.1	16193	809.6	0.9%
Trichloro ETHANE (112)	HALL	774.9	20	11.4	15043	752.1	2.9%
Trichloro ETHENE	PID	30.1	20	7.8	547	27.3	9.2%
BENZENE	PID	54.0	20	6.6	977	48.9	9.5%
ETHYLBENZENE	PID	49.6	20	14.2	893	44.6	10.0%
TOLUENE	PID	52.8	20	10.4	956	47.8	9.4%
m&p-XYLENES	PID	57.3	40	14.5	2070	51.7	9.7%
o-XYLENES	PID	50.9	20	15.6	946	47.3	7.1%

ANALYSES PERFORMED ON-SITE IN TEG'S DORS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

PEAK AREAS

	BLANK	MLG-6	MLG-6	MLG-6	MLG-6	MLG-6	MLG-3				
DATE	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94	12/20/94				
COLLECTION TIME	10:18	13:24	14:16	13:52	12:09	16:09					
ANALYSIS TIME	10:18	13:24	14:17	13:52	12:09	16:09					
SAMPLING DEPTH (feet)	--	50	100	150	200	50					
VOLUME WITHDRAWN (L)	0.06	18	16	54	120	6					
VOLUME INJECTED (cc)	1	1	1	1	1	1					
	RT	RT	RT	RT	RT	RT	RT				
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd				
CHLOROETHANE	nd	nd	nd	nd	nd	nd	nd				
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd				
DICHLORODIFLUORO METHANE	nd	nd	nd	nd	nd	nd	nd				
DICHLORO ETHANE (11)	nd	nd	4.6	1,114	4.6	1,689	4.6	2,222	nd	nd	
DICHLORO ETHANE (12)	nd	nd		nd		nd		nd	nd	nd	
DICHLORO ETHENE (11)	nd	nd	3.2	300	3.2	362	3.2	262	nd	nd	
DICHLORO ETHENE (12 Cis)	nd	nd		nd		nd		nd	nd	nd	
DICHLORO ETHENE (12 Trans)	nd	nd		nd		nd		nd	nd	nd	
DICHLORO METHANE	nd	nd		nd		nd		nd	nd	nd	
TetraCHLORO ETHANE (1112)	nd	nd		nd		nd		nd	nd	nd	
TetraCHLORO ETHANE (1122)	nd	nd		nd		nd		nd	nd	nd	
TetraCHLORO ETHENE	nd	nd	11.6	30	11.7	33	11.6	35	11.5	39	
TrichLORO ETHANE (111)	nd	6.1	3,552	6.1	19,840	6.1	17,963	6.1	15,272	6.1	1,463
TrichLORO ETHANE (112)	nd		nd		nd		nd		nd		nd
TrichLORO ETHENE	nd		7.8	217	7.8	648	7.8	1,745	7.7	54	
TrichLOROFLUORO METHANE	nd		nd		nd		nd		nd		nd
TrichLOROTrifluORO ETHANE	nd		nd		nd		nd		nd		nd
VINYL CHLORIDE	nd	nd		nd		nd		nd			nd
BENZENE	nd	nd		nd		nd		nd			nd
TOLUENE	nd	nd		nd		nd		nd			nd
ETHYLBENZENE	nd	nd		nd		nd		nd			nd
TOTAL XYLENES	nd	nd		nd		nd		nd			nd

ACETONE

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #11317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-3		MLG-3 dup		BLANK	GW-8		GW-8	GW-9
DATE	12/20/94		12/20/94		12/21/94	12/21/94		12/21/94	12/21/94
COLLECTION TIME	16:33		16:57		06:10	07:30		15:28	08:00
ANALYSIS TIME	16:34		16:58		06:13	07:32		15:30	08:04
SAMPLING DEPTH (feet)	100		100		--	50		150	50
VOLUME WITHDRAWN (L)	16		16		0.06	1.4		13	1.4
VOLUME INJECTED (cc)	1		1		1	1		1	1
	RT		RT		RT	RT		RT	RT
CARBON TETRACHLORIDE	nd		nd		nd	nd		nd	nd
CHLOROETHANE	nd		nd		nd	nd		nd	nd
CHLOROFORM	nd		nd		nd	nd		nd	nd
DICHLORODIFLUORO METHANE	nd		nd		nd	nd		nd	nd
DICHLORO ETHANE (11)	4.6	1,982	4.6	1,802	nd	nd		nd	nd
DICHLORO ETHANE (12)	nd		nd		nd	nd		nd	nd
DICHLORO ETHENE (11)	3.1	72	3.2	76	nd	3.2	40	nd	100
DICHLORO ETHENE (12 Cis)	nd		nd		nd	nd		nd	nd
DICHLORO ETHENE (12 Trans)	nd		nd		nd	nd		nd	nd
DICHLORO METHANE	nd		nd		nd	nd		nd	nd
TetraCHLORO ETHANE (1112)	nd		nd		nd	nd		nd	nd
TetraCHLORO ETHANE (1122)	nd		nd		nd	nd		nd	nd
TetraCHLORO ETHENE	11.6	53	11.6	44	nd	nd		nd	121
TrichLORO ETHANE (111)	6.1	3,937	6.1	3,353	nd	6.1	nd	nd	2,494
TrichLORO ETHANE (112)	nd		nd		nd	nd		nd	nd
TrichLORO ETHENE	7.7	219	7.8	221	nd	7.7	60	7.8	456
TrichLOROFLUORO METHANE	nd		nd		nd	nd		nd	nd
TrichLOROTrifLUORO ETHANE	nd		nd		nd	nd		nd	nd
VINYL CHLORIDE	nd		nd		nd	nd		nd	nd
BENZENE	nd		nd		nd	nd		nd	nd
TOLUENE	nd		nd		nd	nd		nd	nd
ETHYLBENZENE	nd		nd		nd	nd		nd	nd
TOTAL XYLENES	nd		nd		nd	nd		nd	nd
ACETONE					nd	nd		nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)
ANALYSES PERFORMED BY: MR. JOHN SCHOLL
DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

PEAK AREAS

	GW-9		GW-10		GW-10		GW-10		MLG-1	
DATE	12/21/94		12/21/94		12/21/94		12/21/94		12/21/94	
COLLECTION TIME	08:24		08:47		14:40		14:40		09:18	
ANALYSIS TIME	08:27		08:50		14:43		15:06		09:21	
SAMPLING DEPTH (feet)	150		50		150		150		50	
VOLUME WITHDRAWN (L)	13.0		1.4		13		13		6	
VOLUME INJECTED (cc)	1		1		1		1		1	
	RT		RT		RT		RT		RT	
CARBON TETRACHLORIDE	nd		nd		nd		--		nd	
CHLOROETHANE	nd		nd		nd		--		nd	
CHLOROFORM	nd		nd		5.8		1,261		nd	
DICHLORODIFLUORO METHANE	nd		nd		nd		--		nd	
DICHLORO ETHANE (11)	nd		nd		nd		--		nd	
DICHLORO ETHANE (12)	nd		nd		nd		--		nd	
DICHLORO ETHENE (11)	3.1	741	nd		3.2	32	--		nd	
DICHLORO ETHENE (12 Cis)	nd		nd		5.3	43	--		5.3	238
DICHLORO ETHENE (12 Trans)	nd		nd		nd		--		nd	
DICHLORO METHANE	nd		nd		nd		--		nd	
Tetrachloro ETHANE (1112)	nd		nd		nd		--		nd	
Tetrachloro ETHANE (1122)	nd		nd		nd		--		nd	
Tetrachloro ETHENE	11.6	275	11.7	62	nd		--		nd	
Trichloro ETHANE (111)	6.1	14,854	6.1	932	6.1	1,647	--		nd	
Trichloro ETHANE (112)	nd		nd		nd		--		nd	
Trichloro ETHENE	7.7	363	7.8	103	7.9	>1,800	7.8	996**	7.7	968
Trichlorofluoro METHANE	nd		nd		nd		--		nd	
Trichlorotrifluoro ETHANE	nd		nd		nd		--		nd	
VINYL CHLORIDE	nd		nd		nd		--		nd	
BENZENE	nd		nd		nd		--		nd	
TOLUENE	nd		nd		nd		--		10.4	803
ETHYLBENZENE	nd		nd		nd		--		nd	
TOTAL XYLENES	nd		nd		nd		--		14.5	179
ACETONE	nd		nd		nd		--		nd	

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

PEAK AREAS

	MLG-1		MLG-1		MLG-1		MLG-1		MLG-1		MLG-1		
	MLG-1		dup		dup		MLG-1		MLG-1		MLG-1		
DATE	12/21/94		12/21/94		12/21/94		12/21/94		12/21/94		12/21/94		
COLLECTION TIME	10:05		10:25		10:47		11:13		11:13		11:54		
ANALYSIS TIME	10:08		10:28		10:53		11:15		11:36		11:58		
SAMPLING DEPTH (feet)	100		100		100		150		150		200		
VOLUME WITHDRAWN (L)	16		16		16		54		54		96		
VOLUME INJECTED (cc)	0.017		1		0.017		1		0.017		1		
	RT		RT		RT		RT		RT		RT		
CARBON TETRACHLORIDE	--		--	nd	--		--	nd	--		--	nd	
CHLOROETHANE	--		--	nd	--		--	nd	--		--	nd	
CHLOROFORM	--	5.8	--	868	--		--	5.8	--	23,357	--	5.9	12,205
DICHLORODIFLUORO METHANE	--		--	nd	--		--	nd	--		--	nd	
DICHLORO ETHANE (11)	--		--	nd	--		--	nd	--		--	4.6	830
DICHLORO ETHANE (12)	--		--	nd	--		--	nd	--		--	nd	nd
DICHLORO ETHENE (11)	--		--	nd	--		--	nd	--		--	3.2	197
DICHLORO ETHENE (12 Cis)	--	5.3	--	324	--		--	5.3	--	280	--	5.3	184
DICHLORO ETHENE (12 Trans)	--		--	nd	--		--	nd	--		--	nd	nd
DICHLORO METHANE	--		--	nd	--		--	nd	--		--	nd	nd
Tetrachloro ETHANE (1112)	--		--	nd	--		--	nd	--		--	nd	nd
Tetrachloro ETHANE (1122)	--		--	nd	--		--	nd	--		--	nd	nd
Tetrachloro ETHENE	--		--	nd	--		--	nd	--		--	11.7	69
Trichloro ETHANE (111)	--		--	nd	--		--	nd	--		--	6.1	12,975
Trichloro ETHANE (112)	--		--	nd	--		--	nd	--		--	nd	nd
Trichloro ETHENE	7.8	535*	7.8	>1,800	7.8	589*	7.8	>1,800	7.8	711*	7.8	>1,800	
Trichlorofluoro METHANE	--		--	nd	--		--	nd	--		--	nd	nd
Trichlorotrifluoro ETHANE	--		--	nd	--		--	nd	--		--	nd	nd
VINYL CHLORIDE	--		--	nd	--		--	nd	--		--	nd	nd
BENZENE	--		--	nd	--		--	nd	--		--	nd	nd
TOLUENE	--	10.4	--	939	--		--	10.4	--	986	--	nd	nd
ETHYLBENZENE	--		--	nd	--		--	14.1	--	53	--	nd	nd
TOTAL XYLENES	--	14.5	--	213	--		--	14.5	--	278	--	nd	nd
ACETONE	--		--	nd	--		--	nd	--		--	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-1		GW-1		GW-7		GW-7		GW-7		MLG-1	
DATE	12/21/94		12/21/94		12/21/94		12/21/94		12/21/94		12/21/94	
COLLECTION TIME	11:54		13:00		13:25		13:42		14:05		15:53	
ANALYSIS TIME	12:20		13:01		13:25		13:45		14:08		15:55	
SAMPLING DEPTH (feet)	200		50		50		150		150		150	
VOLUME WITHDRAWN (L)	96		1.4		1.4		13		13		54	
VOLUME INJECTED (cc)	0.017		1		0.1		1		0.1		1	
	RT		RT		RT		RT		RT		RT	
CARBON TETRACHLORIDE	--		nd		--		nd		--		nd	
CHLOROETHANE	--		nd		--		nd		--		nd	
CHLOROFORM	--		nd		--		nd		--		nd	
DICHLORODIFLUORO METHANE	--		nd		--		nd		--		nd	
DICHLORO ETHANE (11)	--		nd		--	4.6	1,517		--	4.6	3,259	
DICHLORO ETHANE (12)	--		nd		--		nd		--		nd	
DICHLORO ETHENE (11)	--		nd		--	3.2	93		--	3.2	90	
DICHLORO ETHENE (12 Cis)	--		nd		--		nd		--		nd	
DICHLORO ETHENE (12 Trans)	--		nd		--		nd		--		nd	
DICHLORO METHANE	--		nd		--		nd		--		nd	
TetraCHLORO ETHANE (1112)	--		nd		--		nd		--		nd	
TetraCHLORO ETHANE (1122)	--		nd		--		nd		--		nd	
TetraCHLORO ETHENE	--	11.7	37		--	11.7	90		--		nd	
TrichLORO ETHANE (111)	--	6.1	1,238		--	6.1	5,946		--	6.1	5,601	
TrichLORO ETHANE (112)	--		nd		--		nd		--		nd	
TrichLORO ETHENE	7.8	297*	7.8	>1,800	7.8	196**	7.9	>1,800	7.8	704**	7.8	298
TrichLOROFLUORO METHANE	--		nd		--		nd		--		nd	
TrichLOROTrifluORO ETHANE	--		nd		--		nd		--		nd	
VINYL CHLORIDE	--		nd		--		nd		--		nd	
BENZENE	--		nd		--		nd		--		nd	
TOLUENE	--		nd		--		nd		--		nd	
ETHYLBENZENE	--		nd		--		nd		--		nd	
TOTAL XYLENES	--		nd		--		nd		--		nd	
ACETONE	--		nd		--		nd		--		nd	

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-3		MLG-3		MLG-2		MLG-2		BLANK	MLG-2	
DATE	12/21/94		12/21/94		12/21/94		12/21/94		12/22/94	12/22/94	
COLLECTION TIME	16:14		16:14		16:56		17:17		07:02	07:23	
ANALYSIS TIME	16:19		16:41		17:00		17:23		07:04	07:26	
SAMPLING DEPTH (feet)	200		200		50		100		--	150	
VOLUME WITHDRAWN (L)	96		96		6		16		0.06	54	
VOLUME INJECTED (cc)	1		1		1		1		1	1	
	RT		RT		RT		RT		RT	RT	
CARBON TETRACHLORIDE	nd		--		nd		nd		nd	nd	
CHLOROETHANE	nd		--		nd		nd		nd	nd	
CHLOROFORM	nd		--		nd		nd		nd	nd	
DICHLORODIFLUORO METHANE	nd		--		nd		nd		nd	nd	
DICHLORO ETHANE (11)	4.6	7,748	--		nd		4.6	855	nd	4.6	1,155
DICHLORO ETHANE (12)	nd		--		nd		nd		nd	nd	
DICHLORO ETHENE (11)	3.1	239	--		nd		3.2	51	nd	3.2	70
DICHLORO ETHENE (12 Cis)	5.3	57	--		nd		nd		nd	nd	
DICHLORO ETHENE (12 Trans)	nd		--		nd		nd		nd	nd	
DICHLORO METHANE	nd		--		nd		nd		nd	nd	
Tetrachloro ETHANE (1112)	nd		--		nd		nd		nd	nd	
Tetrachloro ETHANE (1122)	nd		--		nd		nd		nd	nd	
Tetrachloro ETHENE	11.7	42	--		nd		11.7	40	nd	nd	
Trichloro ETHANE (111)	6.1	24,816	--		6.1	1,139	6.2	2,596	nd	6.1	2,902
Trichloro ETHANE (112)	nd		--		nd		nd		nd	nd	
Trichloro ETHENE	7.8	>1,800	7.8	325**	7.8	383	7.8	330	nd	7.7	197
Trichlorofluoro METHANE	nd		--		nd		nd		nd	nd	
Trichlorotrifluoro ETHANE	nd		--		nd		nd		nd	nd	
VINYL CHLORIDE	nd		--		nd		nd		nd	nd	
BENZENE	nd		--		nd		nd		nd	nd	
TOLUENE	nd		--		nd		nd		nd	nd	
ETHYLBENZENE	nd		--		nd		nd		nd	nd	
TOTAL XYLENES	nd		--		nd		nd		nd	nd	
ACETONE	nd		--		nd		nd		nd	nd	

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)
ANALYSES PERFORMED BY: MR. JOHN SCHOLL
DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-2		MLG-2		MLG-7		MLG-7		MLG-7		MLG-7	
DATE	12/22/94		12/22/94		12/22/94		12/22/94		12/22/94		12/22/94	
COLLECTION TIME	07:47		08:07		08:27		08:48		09:16		09:37	
ANALYSIS TIME	07:50		08:11		08:28		08:52		09:19		09:41	
SAMPLING DEPTH (feet)	200		200		50		100		150		200	
VOLUME WITHDRAWN (L)	96		96		6		16		54		96	
VOLUME INJECTED (cc)	1		0.1		1		1		1		1	
	RT		RT		RT		RT		RT		RT	
CARBON TETRACHLORIDE	nd		--		nd		nd		nd		nd	
CHLOROETHANE	nd		--		nd		nd		nd		nd	
CHLOROFORM	nd		--		nd		nd		nd		nd	
DICHLORODIFLUORO METHANE	nd		--		nd		nd		nd		nd	
DICHLORO ETHANE (11)	4.7	2,020	--		nd		nd		nd		nd	
DICHLORO ETHANE (12)	nd		--		nd		nd		nd		nd	
DICHLORO ETHENE (11)	3.3	162	--		nd		nd		nd		nd	
DICHLORO ETHENE (12 Cis)	5.4	93	--		nd		nd		nd		nd	
DICHLORO ETHENE (12 Trans)	nd		--		nd		nd		nd		nd	
DICHLORO METHANE	nd		--		nd		nd		nd		nd	
TetraCHLORO ETHANE (1112)	nd		--		nd		nd		nd		nd	
TetraCHLORO ETHANE (1122)	nd		--		nd		nd		nd		nd	
TetraCHLORO ETHENE	11.7	33	--		nd		nd		nd		nd	
TrichLORO ETHANE (111)	6.2	9,100	--		nd		nd		6.1	1,003	nd	
TrichLORO ETHANE (112)	nd		--		nd		nd		nd		nd	
TrichLORO ETHENE	7.8	>1,800	7.8	202**	7.8	218	7.7	68	7.7	118	7.8	145
TrichLOROFLUORO METHANE	nd		--		nd		nd		nd		nd	
TrichLOROTrifluORO ETHANE	nd		--		nd		nd		nd		nd	
VINYL CHLORIDE	nd		--		nd		nd		nd		nd	
BENZENE	nd		--		nd		nd		nd		nd	
TOLUENE	nd		--		nd		nd		nd		nd	
ETHYLBENZENE	nd		--		nd		nd		nd		nd	
TOTAL XYLENES	nd		--		nd		nd		nd		nd	
ACETONE	nd		--		nd		nd		nd		nd	

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-4		MLG-4		MLG-4		MLG-4		MLG-10A		MLG 10A	
DATE	12/22/94		12/22/94		12/22/94		12/22/94		12/22/94		12/22/94	
COLLECTION TIME	10:02		11:17		10:48		11:47		12:12		12:33	
ANALYSIS TIME	10:04		11:21		10:57		11:50		12:14		12:38	
SAMPLING DEPTH (feet)	50		100		150		200		50		100	
VOLUME WITHDRAWN (L)	6		16		54		96		6		16	
VOLUME INJECTED (cc)	1		1		1		1		1		1	
	RT		RT		RT		RT		RT		RT	
CARBON TETRACHLORIDE	nd		nd		nd		nd		nd		nd	
CHLOROETHANE	nd		nd		nd		nd		nd		nd	
CHLOROFORM	nd		nd		nd		nd		nd		nd	
DICHLORODIFLUORO METHANE	nd		nd		nd		nd		nd		nd	
DICHLORO ETHANE (11)	nd		nd		nd		nd		nd		nd	
DICHLORO ETHANE (12)	nd		nd		nd		nd		nd		nd	
DICHLORO ETHENE (11)	nd		3.2	238	3.2	229	3.2	229	nd		3.2	105
DICHLORO ETHENE (12 Cis)	nd		nd		nd		nd		nd		nd	
DICHLORO ETHENE (12 Trans)	nd		nd		nd		nd		nd		nd	
DICHLORO METHANE	nd		nd		nd		nd		nd		nd	
Tetrachloro ETHANE (1112)	nd		nd		nd		nd		nd		nd	
Tetrachloro ETHANE (1122)	nd		nd		nd		nd		nd		nd	
Tetrachloro ETHENE	nd		nd		nd		nd		nd		nd	
Trichloro ETHANE (111)	6.1	1,329	6.1	15,099	6.1	7,421	6.1	8,321	nd		6.1	3,720
Trichloro ETHANE (112)	nd		nd		nd		nd		nd		nd	
Trichloro ETHENE	7.8	100	7.8	216	7.8	480	7.8	1,097	7.8	90	7.8	87
Trichlorofluoro METHANE	nd		nd		nd		nd		nd		nd	
Trichlorotrifluoro ETHANE	nd		nd		nd		nd		nd		nd	
VINYL CHLORIDE	nd		nd		nd		nd		nd		nd	
BENZENE	nd		nd		nd		nd		nd		nd	
TOLUENE	nd		nd		nd		nd		nd		nd	
ETHYLBENZENE	nd		nd		nd		nd		nd		nd	
TOTAL XYLENES	nd		nd		nd		nd		nd		nd	
ACETONE	nd		nd		nd		nd		nd		nd	

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CRRT #1317)
ANALYSES PERFORMED BY: MR. JOHN SCHOLL
DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #941220T3

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-10A		MLG-10A		MLG-5		MLG-5		MLG-5		MLG-5	
DATE	12/22/94		12/22/94		12/22/94		12/22/94		12/22/94		12/22/94	
COLLECTION TIME	13:01		13:24		13:47		14:12		14:38		15:08	
ANALYSIS TIME	13:03		13:26		13:49		14:14		14:40		15:11	
SAMPLING DEPTH (feet)	150		200		50		100		150		200	
VOLUME WITHDRAWN (L)	54		96		6		16		54		96	
VOLUME INJECTED (cc)	1		1		1		1		1		1	
	RT		RT		RT		RT		RT		RT	
CARBON TETRACHLORIDE	nd		nd		nd		nd		nd		nd	
CHLOROETHANE	nd		nd		nd		nd		nd		nd	
CHLOROFORM	nd		nd		nd		nd		nd		nd	
DICHLORODIFLUORO METHANE	nd		nd		nd		nd		nd		nd	
DICHLORO ETHANE (11)	nd		nd		nd		4.6	1,126	nd		nd	
DICHLORO ETHANE (12)	nd		nd		nd		nd		nd		nd	
DICHLORO ETHENE (11)	nd		3.1	38	3.2	47	3.2	250	3.1	96	nd	
DICHLORO ETHENE (12 Cis)	nd		nd		nd		nd		nd		nd	
DICHLORO ETHENE (12 Trans)	nd		nd		nd		nd		nd		nd	
DICHLORO METHANE	nd		nd		nd		nd		nd		nd	
Tetrachloro ETHANE (1112)	nd		nd		nd		nd		nd		nd	
Tetrachloro ETHANE (1122)	nd		nd		nd		nd		nd		nd	
Tetrachloro ETHENE	nd		nd		nd		nd		nd		nd	
Trichloro ETHANE (111)	nd		6.1	1,350	6.1	3,827	6.1	17,198	6.1	6,066	6.1	1,125
Trichloro ETHANE (112)	nd		nd		nd		nd		nd		nd	
Trichloro ETHENE	7.7	46	7.7	107	7.8	34	7.8	37	7.7	34	nd	
Trichlorofluoro METHANE	nd		nd		nd		nd		nd		nd	
Trichlorotrifluoro ETHANE	nd		nd		nd		nd		nd		nd	
VINYL CHLORIDE	nd		nd		nd		nd		nd		nd	
BENZENE	nd		nd		nd		nd		nd		nd	
TOLUENE	nd		nd		nd		nd		nd		nd	
ETHYLBENZENE	nd		nd		nd		nd		nd		nd	
TOTAL XYLENES	nd		nd		nd		nd		nd		nd	
ACETONE	nd		nd		nd		nd		nd		nd	

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00
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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

PEAK AREAS

	MLG-2		MLG-2		BLANK	MLG-9		MLG-9		MLG-9
	dup		dup							
DATE	12/22/94		12/22/94		12/23/94	12/23/94		12/23/94		12/23/94
COLLECTION TIME	15:33		15:33		07:12	07:36		07:58		08:23
ANALYSIS TIME	15:35		15:53		07:17	07:39		08:02		08:26
SAMPLING DEPTH (feet)	200		200		--	50		100		150
VOLUME WITHDRAWN (L)	96		96		0.06	6		16		54
VOLUME INJECTED (cc)	1		0.1		1	1		1		1
	RT		RT		RT	RT		RT		RT
CARBON TETRACHLORIDE	nd		--		nd	nd		nd		nd
CHLOROETHANE	nd		--		nd	nd		nd		nd
CHLOROFORM	nd		--		nd	nd		nd		nd
DICHLORODIFLUORO METHANE	nd		--		nd	nd		nd		nd
DICHLORO ETHANE (11)	4.6	2,338	--		nd	nd		nd		nd
DICHLORO ETHANE (12)	nd		--		nd	nd		nd		nd
DICHLORO ETHENE (11)	3.2	181	--		nd	nd		nd		nd
DICHLORO ETHENE (12 Cis)	5.3	115	--		nd	nd		nd		nd
DICHLORO ETHENE (12 Trans)	nd		--		nd	nd		nd		nd
DICHLORO METHANE	nd		--		nd	nd		nd		nd
Tetrachloro ETHANE (1112)	nd		--		nd	nd		nd		nd
Tetrachloro ETHANE (1122)	nd		--		nd	nd		nd		nd
Tetrachloro ETHENE	11.7	47	--		nd	nd		nd		nd
Trichloro ETHANE (111)	6.1	10,218	--		nd	nd		nd		nd
Trichloro ETHANE (112)	nd		--		nd	nd		nd		nd
Trichloro ETHENE	7.8	>1,800	7.8	355**	nd	nd		nd		nd
Trichlorofluoro METHANE	nd		--		nd	nd		nd		nd
Trichlorotrifluoro ETHANE	nd		--		nd	nd		nd		nd
VINYL CHLORIDE	nd		--		nd	nd		nd		nd
BENZENE	nd		--		nd	nd		nd		nd
TOLUENE	nd		--		nd	nd		nd		nd
ETHYLBENZENE	nd		--		nd	nd		nd		nd
TOTAL XYLENES	nd		--		nd	nd		nd		nd
ACETONE	nd		--		nd	nd		nd		nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. JOHN SCHOLL

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00
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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
PEAK AREAS

	MLG-9	MLG-8	MLG-8	MLG-8	MLG-8	MLG-8 dup
DATE	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94	12/23/94
COLLECTION TIME	08:45	09:07	09:30	09:52	10:16	10:38
ANALYSIS TIME	08:48	09:10	09:32	09:55	10:18	10:41
SAMPLING DEPTH (feet)	200	50	100	150	200	200
VOLUME WITHDRAWN (L)	96	6	16	54	96	96
VOLUME INJECTED (cc)	1	1	1	1	1	1
	RT	RT	RT	RT	RT	RT
CARBON TETRACHLORIDE	nd	nd	nd	nd	6.3	2682
CHLOROETHANE	nd	nd	nd	nd	nd	6.3
CHLOROFORM	nd	nd	nd	nd	nd	3051
DICHLORODIFLUORO METHANE	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (11)	nd	nd	nd	nd	nd	nd
DICHLORO ETHANE (12)	nd	nd	nd	nd	nd	nd
DICHLORO ETHENE (11)	nd	nd	3.1	107	3.1	125
DICHLORO ETHENE (12 Cis)	nd	nd	nd	nd	3.2	148
DICHLORO ETHENE (12 Trans)	nd	nd	nd	nd	3.1	175
DICHLORO METHANE	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHANE (1112)	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHANE (1122)	nd	nd	nd	nd	nd	nd
TetraCHLORO ETHENE	nd	nd	nd	nd	nd	nd
TrichLORO ETHANE (111)	nd	nd	6.1	1,309	6.1	5,126
TrichLORO ETHANE (112)	nd	nd	nd	nd	6.1	2,220
TrichLORO ETHENE	nd	nd	7.7	32	7.7	192
TrichLOROFUORO METHANE	nd	nd	nd	nd	7.8	661
TrichLOROTRIFLUORO ETHANE	nd	nd	nd	nd	nd	7.7
VINYL CHLORIDE	nd	nd	nd	nd	nd	792
BENZENE	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd
TOTAL XYLENES	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* DETECTION LIMIT INCREASED TO 60 UG/L-VAPOR DUE TO DILUTION

** DETECTION LIMIT INCREASED TO 10 UG/L-VAPOR DUE TO DILUTION

ANALYSES PERFORMED ON-SITE IN TEG'S DONS CERTIFIED MOBILE LABORATORY (CERT #1317)
ANALYSES PERFORMED BY: MR. JOHN SCHOLL
DATA REVIEWED BY: DR. BLAYNE HARTMAN



ANALYTICAL PROCEDURES

The following text gives a brief summary of the analytical procedures used. Detailed descriptions are available upon request.

SAMPLE PREPARATION

Waters

Waters are prepared for TPH analysis (gasoline and diesel) and aromatic hydrocarbon analysis (BTEX) by either liquid-liquid extraction with freon 113 using a modified EPA Method 3510 or by purge & trap using EPA method 5030. For volatile chlorinated hydrocarbons, water samples are prepared by purge & trap following EPA Method 5030.

Soils

Soil samples are extracted with methanol for volatile chlorinated hydrocarbon compounds (EPA 8010) and with freon 113 for volatile aromatic hydrocarbon compounds (EPA 8020) and fuel compounds (DOHS approved EPA 8015m) by liquid-solid extraction using a modified EPA method 3550.

GAS CHROMATOGRAPHY

Volatile Chlorinated Hydrocarbons

Water samples and soil extracts are purged in a Tekmar LSC-2000 purge & trap, and backflushed into a Shimadzu 14A gas chromatograph equipped with megabore capillary columns and photoionization detector (PID) and Hall electrolytic detectors following EPA Methods 601/8010 and 602/8020.

Volatile Aromatic Hydrocarbons (BTEX) & Total Fuel Hydrocarbons (TPH)

An aliquot of the soil extract is injected on-column into a Shimadzu gas chromatograph equipped with megabore capillary columns, photoionization (PID) and flame ionization detectors (FID).

TOTAL RECOVERABLE HYDROCARBONS

Extracts are scrubbed with silica gel and measured on a BUCK 404 Infrared Analyzer following EPA 418.1 protocols.

DATA ACQUISITION & PROCESSING

Data from the gas chromatographs are acquired by Peaksimple computer data acquisition system. Separate chromatograms are printed for each detector. The resulting chromatograms are inspected at the end of each run and the data entered into a spreadsheet for on-site processing and evaluation.



SOIL VAPOR SURVEY METHODOLOGY

Probe Construction

TEG's soil vapor probes are constructed of 5/8 inch outer diameter, stainless steel, equipped with a hardened, reverse-threaded steel tip. Nominal lengths are 6 feet although additional lengths may be added. An inert 1/8 inch polypropylene nylaflow tube runs down the center of the probe to sampling ports beneath the tip (refer to the attached figure).

Probe Insertion

The probe is driven into the ground by either an electric rotary hammer or with TEG's truck-mounted hydraulic/vibrational system. Once inserted to the desired depth, the probe is rotated 3 to 5 turns in a clockwise direction, which opens the tip and exposes the vapor sampling ports. This design prevents clogging of the sampling ports and cross-contamination from soils during insertion.

Gas Sampling

Soil vapor is withdrawn from the nylaflow tubing using a syringe connected via an on-off valve. The first 40 cc of gas are discarded to flush the dead volume of the probe and fill it with in-situ soil vapor. The next 20 cc of gas are withdrawn in a syringe, plugged, and immediately transferred to the mobile lab for analysis within 5 minutes of collection. Additional soil vapor may be collected and stored in gas-tight containers as desired.

Flushing & Decontamination Procedures

To minimize the potential for cross-contamination between sites, all probe parts are cleaned of excess dirt and moisture prior to insertion. The nylaflow tubing and sampling ports are flushed with hundreds of cc's of ambient air between samples. If water, dirt, or any material is observed in the tubing, the tubing is replaced with fresh tubing.

Analysis of Soil Vapor

To eliminate loss of gases during storage, collected gas samples are analyzed immediately after collection in TEG's state certified mobile laboratory. One cc of air is injected into a Shimadzu gas chromatograph equipped with megabore capillary columns and with flame ionization, HNU photoionization detector (10.2 ev lamp), and Hall electrolytic conductivity detectors (Tracor model 1000). These detectors enable on-site analysis for landfill hydrocarbons, petroleum hydrocarbons, volatile aromatics (BTEX), and volatile chlorinated compounds (DCE, TCE, PCE, DCA, TCA, PCA) using EPA approved analytical methodology outlined in methods 8010, 8015, & 8020. Output signals from each detector are processed by HP3393A computing integrators or computer chromatography software and the results entered into a laboratory computer for on-site processing and graphing.

Transglobal Environmental Geochemistry

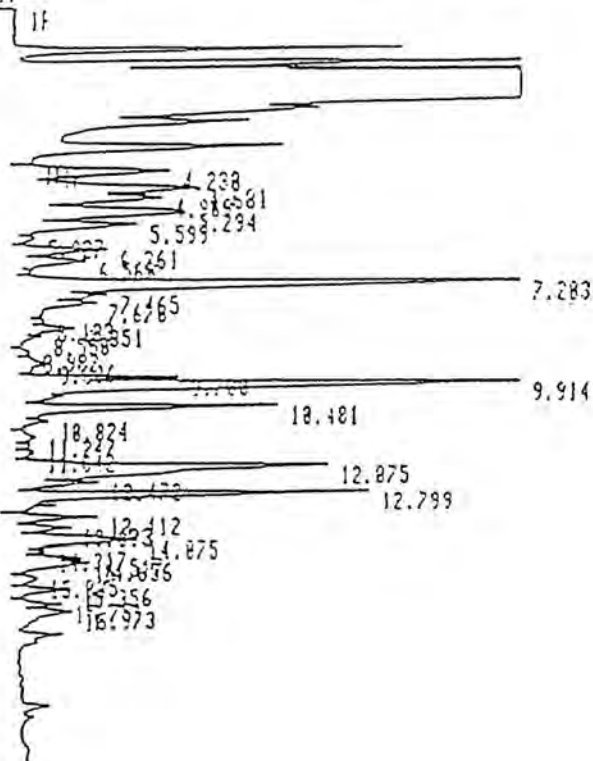
432 N. Cedros Ave., Solana Beach CA 92075 Ph: (619) 793-0401 Fax: (619) 793-0404



TOTAL PETROLEUM HYDROCARBONS (EPA 8015m)

GASOLINE

* RUN# 82 JUL 25, 1998 14:56
START



STOP

Closing signal file M:SIGNAL .BHC

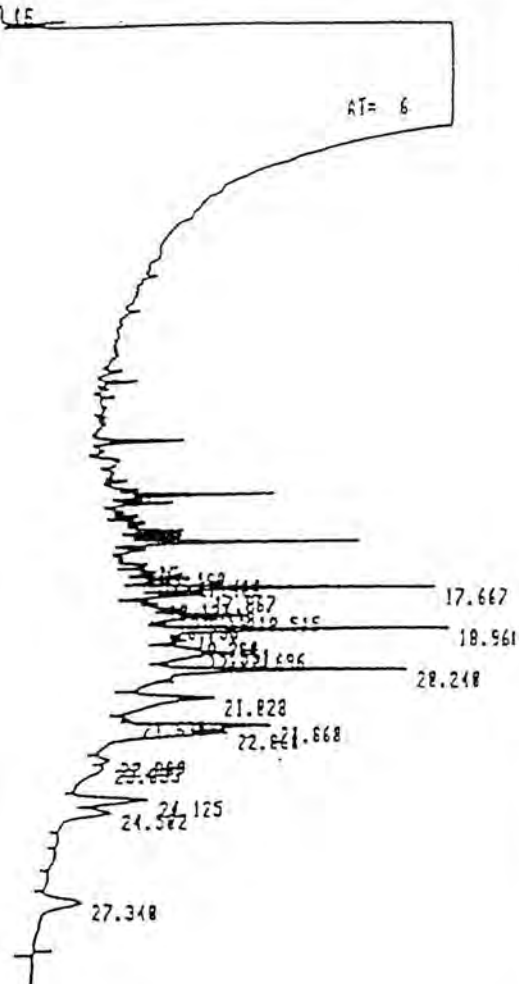
RUN# 82 JUL 25, 1998 14:58:41

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EPA METHOD 8015

DIESEL

* RUN# 6 SEP 11, 1998 14:15:03
START



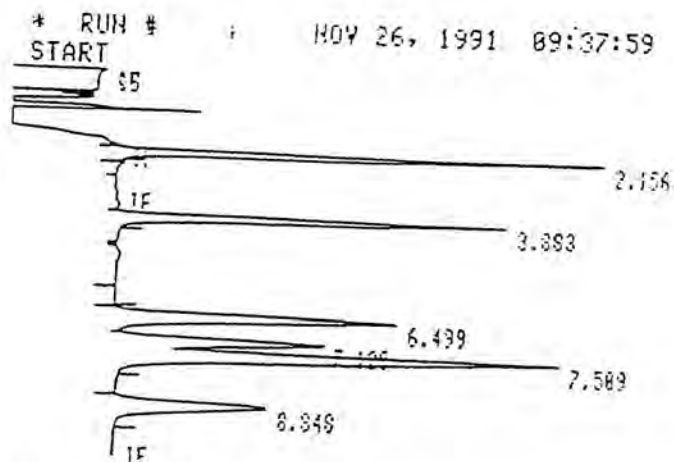
TIMETABLE STOP

Closing signal file M:SIGNAL .BHC

RUN# 6 SEP 11, 1998 14:15:03



VOLATILE AROMATIC HYDROCARBONS (EPA 602/8020)



TIMETABLE STOP

Closing signal file M:SIGNAL .BNC

RUN# 4 NOV 26, 1991 89:37:59

SIGNAL FILE: M:SIGNAL.BNC

EPA8020M

ESTD

RT	TYPE	AREA	WIDTH	HEIGHT
2.156	BB	413165	.894	73440
3.883	PB	366894	.137	44456
6.499	BB	387750	.200	32291
7.128	BB	289464	.178	19467
7.589	BB	545349	.200	45373
8.848	BB	278647	.265	17522

RT	CAL#	PPM	SOIL	NAME
2.156	1K	1.195		BENZENE
3.883	2K	1.221		TOLUENE
6.499	3K	1.201		CHLOROBENZ
7.128	4K	1.232		ETHYLBENZ
7.589	5K	2.342		M&P XYLENE
8.848	6K	1.250		B XYLENE

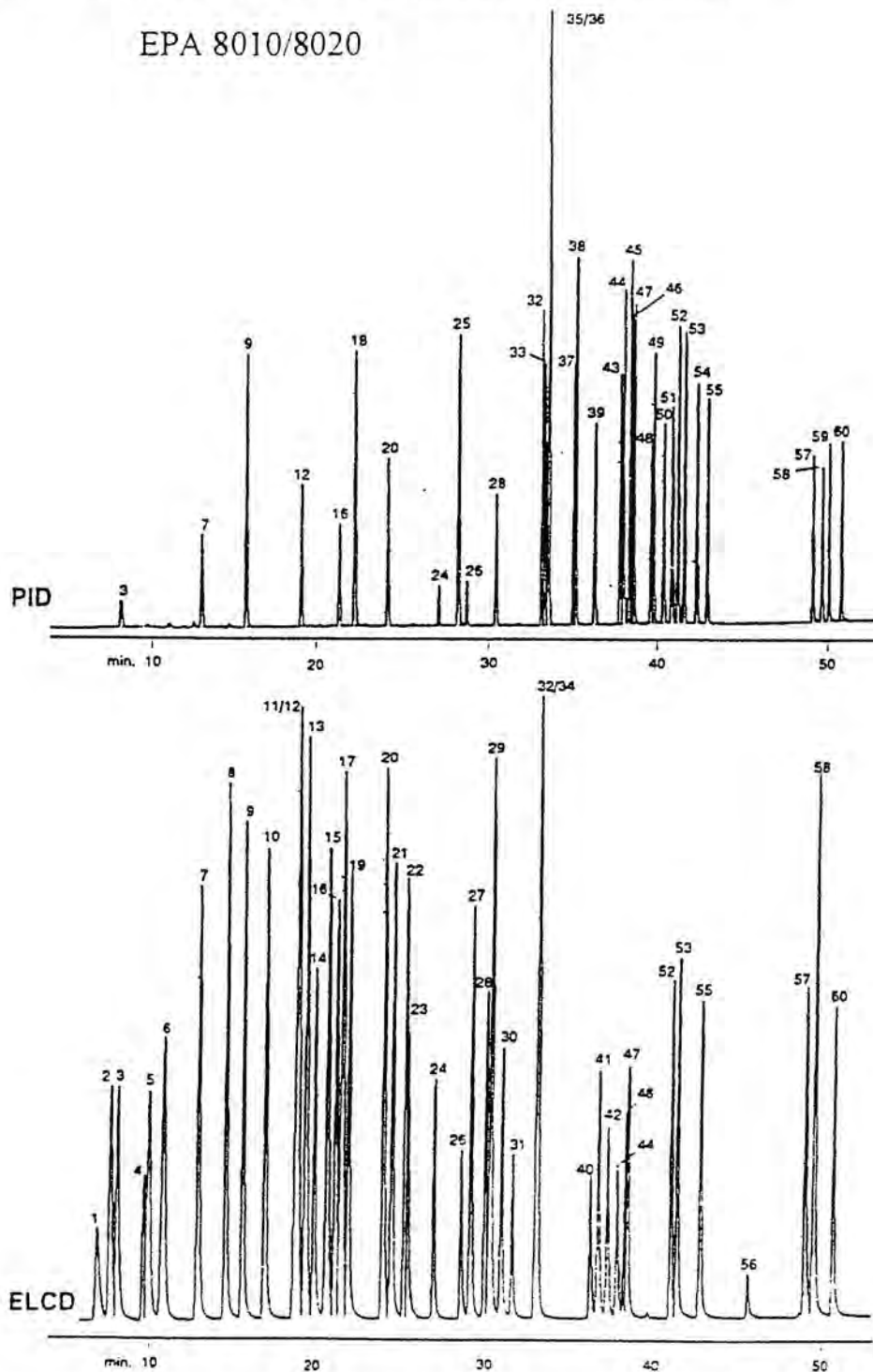
TOTAL AREA=2199369
MUL FACTOR=1.0000E+00



HALOGENATED & AROMATIC VOLATILE HYDROCARBONS

EPA 8010/8020

1	dichlorodifluoromethane
2	chloromethane
3	vinyl chloride
4	bromomethane
5	chloroethane
6	trichlorofluoromethane
7	1,1-dichloroethene
8	methylene chloride
9	trans-1,2-dichloroethene
10	1,1-dichloroethane
11	2,2-dichloropropane
12	cis-1,2-dichloroethene
13	chloroform
14	bromochloromethane
15	1,1,1-trichloroethane
16	1,1-dichloropropane
17	carbon tetrachloride
18	benzene
19	1,2-dichloroethane
20	trichloroethene
21	1,2-dichloropropane
22	bromodichloromethane
23	tribromomethane
24	cis-1,3-dichloropropene
25	toluene
26	trans-1,3-dichloropropene
27	1,1,2-trichloroethane
28	tetrachloroethene
29	1,3-dichloropropane
30	tribromochloromethane
31	1,2-dibromoethane
32	chlorobenzene
33	ethyl benzene
34	1,1,1,2-tetrachloroethane
35	m-xylene
36	p-xylene
37	o-xylene
38	styrene
39	isopropyl benzene
40	bromoform
41	1,1,2,2-tetrachloroethane
42	1,2,3-trichloropropane
43	n-propyl benzene
44	bromobenzene
45	1,3,5-trimethylbenzene
46	2-chlorotoluene
47	4-chlorotoluene
48	tert-butylbenzene
49	1,2,4-trimethylbenzene
50	sec-butylbenzene
51	p-isopropyltoluene
52	1,3-dichlorobenzene
53	1,4-dichlorobenzene
54	n-butylbenzene
55	1,2-dichlorobenzene
56	1,2-dibromo-3-chloropropane
57	1,2,4-trichlorobenzene
58	hexachlorobutadiene
59	naphthalene
60	1,2,3-trichlorobenzene



Transglobal Environmental Geochemistry

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APPENDIX C
TEG REPORT NO. 950123CM
JANUARY 31, 1995



January 31, 1995

Mr. Seyed Mortazavi
Hydrologue, Inc.
1155 East Green Street
Pasadena, CA 91106

**SUBJECT: DATA REPORT - SOIL VAPOR SURVEY - ALLIED SIGNAL, 11600
SHERMAN WAY, NORTH HOLLYWOOD, CA - HYDROLOGUE
PROJECT #1131-00**

TEG Project #950123CM

Mr. Mortazavi:

Please find enclosed a data report for the soil vapor survey conducted by TEG at the above referenced site for Hydrologue. Soil vapor was collected by TEG and analyzed on-site in TEG's DOHS certified mobile laboratory (CERT #1317). TEG personnel analyzed soil vapor from 48 points for:

- volatile halogenated hydrocarbons by EPA Method 8010
- volatile aromatic hydrocarbons (BTEX) by EPA Method 8020
- total petroleum hydrocarbons (TPH) by DOHS Modified EPA Method 8015
- Fixed Gases
- Acetone

The results of the analyses are summarized in the attached tables. Also enclosed are brief descriptions of TEG's soil vapor procedure and standard chromatograms of the analyses performed on the samples.

TEG appreciates the opportunity to provide analytical services to Hydrologue for this project. If you have any questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Dr. Blayne Hartman



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #950123CM

GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	MLG5	MLG5 DUP	MLG5	MLG5	MLG5	MLG10A	MLG10A
DATE	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95
ANALYSIS TIME	09:42	10:53	11:18	11:48	12:16	12:47	13:14	13:38
SAMPLING DEPTH (feet)	--	50	50	100	150	200	50	100
VOLUME WITHDRAWN (L)	0.02	6	6	23	51	51	6	23
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	2.5	1.4	nd	nd	nd
1,1 DICHLORO ETHENE	nd	6.6	6.4	22.3	11.3	1.6	nd	9.1
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE	nd	14.2	13.0	--	22.3	2.9	nd	8.5
TRICHLORO ETHENE	nd	nd	nd	1.4	nd	nd	nd	1.6
TETRACHLORO ETHENE	nd	1.7	1.5	1.8	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	nd	--	--	38.5	--	--	--	--
TRICHLORO ETHENE (FID)	nd	--	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	nd	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #950123CM

GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L VAPOR

	MLG10A	MLG10A	MLG9	MLG9	MLG9	MLG9	MLG7	MLG7
DATE	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95
ANALYSIS TIME	14:04	14:33	14:59	15:26	15:53	16:18	16:44	17:08
SAMPLING DEPTH (feet)	150	200	50	100	150	200	50	100
VOLUME WITHDRAWN (L)	51	91	6	23	51	91	6	23
VOLUME INJECTED	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	1.7	6.0	nd	1.8	nd	1.0	nd	5.2
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE	1.2	3.4	nd	1.4	nd	nd	nd	9.4
TRICHLORO ETHENE	1.1	7.1	nd	nd	nd	nd	nd	2.1
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	--	--	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd
m,p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #950123CM

GC SHIMADZU 14A RIGHT

VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

SOIL VAPOR DATA IN UG/L-VAPOR

	BLANK	MLG7	MLG7	MLG4	MLG4	MLG4	MLG4	MLG2	MLG2	MLG2
DATE	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95
ANALYSIS TIME	07:53	08:36	09:07	09:35	10:00	10:31	11:04	11:35	12:03	12:34
SAMPLING DEPTH (feet)	--	150	200	50	100	150	200	50	100	150
VOLUME WITHDRAWN (cc)	0.02	51	91	6	23	51	91	6	23	51
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	1.0	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	1.5	nd	3.8	10.4
1,1 DICHLORO ETHENE	nd	4.0	5.8	nd	33.1	19.8	22.6	nd	9.3	21.0
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	1.1	nd	1.0	5.2
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	nd	3.0	2.5	2.6	45.2	16.6	26.5	nd	10.4	32.5
TRICHLORO ETHENE (PID)	nd	3.6	8.5	nd	11.4	28.5	--	1.5	9.6	40.3
TETRACHLORO ETHENE (PID)	nd	nd	nd	nd	nd	nd	2.2	nd	4.2	7.1
1,1,1 TRICHLORO ETHANE (PID)	nd	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (PID)	nd	--	--	--	--	--	59.4	--	--	--
TETRACHLORO ETHENE (PID)	nd	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	nd	--	--	--	--	--	--	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00

Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #950123CM

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	MLG2	MLG3	MLG3	MLG3	MLG3	MLG6	MLG6	MLG6	MLG6	MLG6 DUP
DATE	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95
ANALYSIS TIME	13:04	13:34	14:00	14:25	14:54	15:25	15:56	16:23	16:58	17:30
SAMPLING DEPTH (feet)	200	50	100	150	200	50	100	150	200	200
VOLUME WITHDRAWN (cc)	91	6	23	51	91	6	23	51	91	91
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	4.1	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	9.1	10.4	19.0	nd	2.1	4.4	3.5	4.2
1,1 DICHLORO ETHENE	19.4	2.2	10.4	11.4	28.7	2.3	29.2	46.3	27.7	31.1
1,2 DICHLORO ETHANE	7.1	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	9.8	nd	1.2	1.3	5.7	nd	nd	1.2	2.0	2.3
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	34.0	3.3	13.5	16.4	--	5.8	39.6	45.5	23.4	34.7
TRICHLORO ETHENE (PID)	--	7.7	14.8	17.1	--	2.1	17.6	--	--	--
TETRACHLORO ETHENE (PID)	3.9	nd	1.6	1.8	4.1	nd	nd	2.2	1.7	2.3
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	39.4	--	--	--	--	--
TRICHLORO ETHENE (FID)	144.5	--	--	--	254.8	--	--	55.7	118.4	147.9
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	nd	nd	nd	--	--	--	--	--

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #950123CM

GC SHIMADZU 14A RIGHT
VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L VAPOR

	BLANK	GW7	GW7	GW7 DUP	MLG1	MLG1	MLG1	MLG1	GW10
DATE	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95
ANALYSIS TIME	06:19	07:48	08:18	08:46	09:17	09:44	10:23	11:01	11:27
SAMPLING DEPTH (feet)	--	50	150	150	50	100	150	200	50
VOLUME WITHDRAWN (cc)	20	1.5	13	13	6	23	51	91	1.5
VOLUME INJECTED	1	1	1	1	1	1	1	0.1	1
DILUTION FACTOR	1	1	1	1	1	1	1	10	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	6.0	51.4	14.2	nd
1,1 DICHLORO ETHANE	nd	nd	2.6	3.4	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	3.4	7.3	9.0	nd	nd	nd	18.1	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	1.2	1.4	nd	31.8	22.1	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	nd	3.1	10.3	13.2	nd	nd	nd	19.5	nd
TRICHLORO ETHENE (PID)	nd	--	--	--	14.7	--	--	--	9.3
TETRACHLORO ETHENE (PID)	nd	2.1	4.5	6.0	nd	nd	1.4	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	nd	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	nd	139.7	320.7	370.5	--	3,175.7	3,370.7	975.6	--
TETRACHLORO ETHENE (FID)	nd	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	2.0	2.0	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	4.3	3.3	nd	nd
TOLUENE	nd	nd	nd	nd	nd	48.9	35.7	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	12.1	10.8	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	2.6	1.3	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* INDICATES THAT THE ANALYTE WAS QUANTIFIED FROM A 0.1CC INJECTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #950123CM

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
SOIL VAPOR DATA IN UG/L-VAPOR

	GW10	GW8	GW8	GW9	GW9	MLG8	MLG8	MLG8	MLG8
DATE	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95
ANALYSIS TIME	11:55	12:24	12:50	13:19	13:45	14:41	15:06	15:46	16:20
SAMPLING DEPTH (feet)	150	50	150	50	150	50	100	150	200
VOLUME WITHDRAWN (cc)	13	1.5	13	1.5	13	6	23	51	91
VOLUME INJECTED	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	2.4	4.4
CHLOROFORM	3.7	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	12.3	4.3	6.2	11.8	*56.0	2.1	10.9	14.6	16.0
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	7.2	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	8.1	1.9	1.5	8.4	*39.0	2.0	7.6	8.2	7.4
TRICHLORO ETHENE (PID)	--	3.8	9.4	6.3	34.1	nd	2.3	17.0	--
TETRACHLORO ETHENE (PID)	3.3	nd	nd	13.0	37.3	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	1,156.5	--	--	--	--	--	--	--	44.3
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* INDICATES THAT THE ANALYTE WAS QUANTIFIED FROM A 0.1CC INJECTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #950123CM

TPH BY MODIFIED EPA METHOD 8015; FIXED GASES BY TCD

SAMPLE NUMBER	DATE ANALYZED	TPH (PPMV)	CO2 (%)	OXYGEN (%)
AIR BLANK	01/23/95	ND	0.03	21.1
MLG5-50	01/23/95	2.9	0.22	20.1
MLG5-50 DUP	01/23/95	2.3	0.20	19.4
MLG5-100	01/23/95	2.6	0.24	19.3
MLG5-150	01/23/95	4.9	0.17	17.0
MLG5-200	01/23/95	ND	0.28	17.2
MLG10A-50	01/23/95	ND	0.08	18.3
MLG10A-100	01/23/95	2.6	0.07	17.4
MLG10A-150	01/23/95	ND	0.04	18.8
MLG10A-200	01/23/95	1.9	0.17	16.9
MLG9-50	01/23/95	ND	0.29	18.3
MLG9-100	01/23/95	ND	0.31	17.8
MLG9-150	01/23/95	ND	0.24	17.6
MLG9-200	01/23/95	ND	0.24	16.8
MLG7-50	01/23/95	ND	0.68	17.2
MLG7-100	01/23/95	2.2	0.30	17.2

DETECTION LIMIT FOR TPH 1.0 PPMV

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-03
Allied Signal
11600 Sherman Way
North Hollywood, CA

TEG Project #950123CM

TPH BY MODIFIED EPA METHOD 8015; FIXED GASES BY TCD

SAMPLE NUMBER	DATE ANALYZED	TPH (PPMV)	CO2 (%)	OXYGEN (%)
AIR BLANK	01/24/95	ND	0.04	20.7
MLG7-150	01/24/95	ND	0.07	18.7
MLG7-200	01/24/95	1.5	0.13	18.3
MLG4-50	01/24/95	ND	1.30	14.7
MLG4-100	01/24/95	8.6	0.47	14.9
MLG4-150	01/24/95	7.3	0.30	16.7
MLG4-200	01/24/95	12.2	0.46	15.1
MLG2-50	01/24/95	ND	0.31	17.2
MLG2-100	01/24/95	3.3	0.54	14.9
MLG2-150	01/24/95	10.8	0.61	14.8
MLG2-200	01/24/95	25.6	0.72	14.1
MLG3-50	01/24/95	ND	0.36	16.9
MLG3-100	01/24/95	4.6	0.56	17.9
MLG3-150	01/24/95	4.0	0.60	18.1
MLG3-200	01/24/95	45.5	1.10	14.8
MLG6-50	01/24/95	1.3	0.54	19.0
MLG6-100	01/24/95	10.0	0.75	17.8
MLG6-150	01/24/95	17.8	0.65	17.0
MLG6-200	01/24/95	22.0	0.56	16.1
MLG6-200 DUP	01/24/95	26.1	0.60	16.0

DETECTION LIMIT FOR TPH 1.0 PPMV

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman
2-8-95



HYDROLOGUE PROJECT #1131-00

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11600 Sherman Way

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TPH BY MODIFIED EPA METHOD 8015; FIXED GASES BY TCD

SAMPLE NUMBER	DATE ANALYZED	TPH (PPMV)	CO2 (%)	OXYGEN (%)
AIR BLANK	01/25/95	ND	0.04	21.0
GW7-50	01/25/95	22.5	1.89	12.6
GW7-150	01/25/95	50.3	2.29	10.9
GW7-150 DUP	01/25/95	58.1	2.54	10.3
MLG1-50	01/25/95	1.9	2.93	10.0
MLG1-100	01/25/95	551.8	3.89	3.8
MLG1-150	01/25/95	569.5	5.17	2.4
MLG1-200	01/25/95	145.5	2.30	11.6
GW10-50	01/25/95	2.3	1.82	13.1
GW10-150	01/25/95	176.4	3.55	6.5
GW8-50	01/25/95	2.3	0.51	17.5
GW8-150	01/25/95	3.0	0.32	17.4
GW9-50	01/25/95	4.1	0.50	18.3
GW9-150	01/25/95	24.4	0.55	15.7
MLG8-50	01/25/95	1.4	0.23	19.0
MLG8-100	01/25/95	3.3	0.42	16.7
MLG8-150	01/25/95	6.3	0.45	17.0
MLG8-200	01/25/95	10.5	0.37	16.6

DETECTION LIMIT FOR TPH 1.0 PPMV

ANALYSES PERFORMED IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1317)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN

Blayne Hartman

2-8-95



HYDROLOGUE PROJECT #1131-00

Allied Signal

11600 Sherman Way

North Hollywood, CA

TEG Project #950123CM

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	BLANK RT	BLANK AREA	MLG5 RT	MLG5 AREA	MLG5 DUP RT	MLG5 DUP AREA	MLG5 RT	MLG5 AREA	MLG5 RT	MLG5 AREA	MLG5 RT	MLG5 AREA
DATE	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95
ANALYSIS TIME	09:42	09:42	10:53	10:53	11:18	11:18	11:48	11:48	12:16	12:16	12:47	12:47
SAMPLING DEPTH (feet)	--	--	50	50	50	50	100	100	150	150	200	200
VOLUME WITHDRAWN (L)	0.02	0.02	6	6	6	6	23	23	51	51	91	91
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	4.5	1,379.1	4.5	767.2	nd	nd
1,1 DICHLORO ETHENE	nd	nd	3.1	29.7	3.1	28.6	3.1	100.2	3.1	50.9	3.1	7.4
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE	nd	nd	6.0	8,567.5	6.0	7,824.0	--	--	6.0	13,402.3	6.0	1,761.3
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	7.7	8.8	nd	nd	nd	nd
TETRACHLORO ETHENE	nd	nd	11.6	9.2	11.6	8.0	11.7	9.6	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	nd	--	--	--	--	--	3.3	7.8	--	--	--	--
TRICHLORO ETHENE (FID)	nd	--	--	--	--	--	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	nd	--	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m,p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

Allied Signal
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North Hollywood, CA

TEG Project #950123CM

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	MLG10A RT	MLG10A AREA	MLG10A RT	MLG10A AREA	MLG10A RT	MLG10A AREA	MLG10A RT	MLG10A AREA	MLG9 RT	MLG9 AREA
DATE	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95
ANALYSIS TIME	13:14	13:14	13:38	13:38	14:04	14:04	14:33	14:33	14:59	14:59
SAMPLING DEPTH (feet)	50	50	100	100	150	150	200	200	50	50
VOLUME WITHDRAWN (L)	6	6	23	23	51	51	91	91	6	6
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	nd	3.0	41.0	3.1	7.5	3.1	27.1	nd	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE	nd	nd	6.0	5,100.0	6.0	712.0	6.0	2,032.7	nd	nd
TRICHLORO ETHENE	nd	nd	7.7	9.8	7.7	7.0	7.7	44.1	nd	nd
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. DLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	MLG9 RT	MLG9 AREA	MLG9 RT	MLG9 AREA	MLG9 RT	MLG9 AREA	MLG7 RT	MLG7 AREA	MLG7 RT	MLG7 AREA
DATE	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95	01/23/95
ANALYSIS TIME	15:26	15:26	15:53	15:53	16:18	16:18	16:44	16:44	17:08	17:08
SAMPLING DEPTH (feet)	100	100	150	150	200	200	50	50	100	100
VOLUME WITHDRAWN (L)	23	23	51	51	91	91	6	6	23	23
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	3.1	8.2	nd	nd	3.1	4.6	nd	nd	3.1	23.3
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE	6.0	814.3	nd	nd	nd	nd	nd	nd	6.0	5,665.1
TRICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	7.7	32.9
TETRACHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

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11600 Sherman Way

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	BLANK RT	BLANK AREA	MLG7 RT	MLG7 AREA	MLG7 RT	MLG7 AREA	MLG4 RT	MLG4 AREA	MLG4 RT	MLG4 AREA
DATE	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95
ANALYSIS TIME	07:53	07:53	08:36	08:36	09:07	09:07	09:35	09:35	10:00	10:00
SAMPLING DEPTH (feet)	--	--	150	150	200	200	50	50	100	100
VOLUME WITHDRAWN (L)	0.02	0.02	51	51	91	91	6	6	23	23
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	6.1	598.0	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	nd	3.1	14.5	3.1	20.9	nd	nd	3.1	319.2
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	nd	nd	6.1	1,375.6	6.1	1,182.1	6.1	1,226.7	6.0	21,007.1
TRICHLORO ETHENE (FID)	nd	nd	7.8	18.7	7.8	44.1	nd	nd	7.7	59.3
TETRACHLORO ETHENE (FID)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	nd	nd	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	nd	nd	--	--	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	nd	nd	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	--	--	--	--	--	--	--	--

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



HYDROLOGUE PROJECT #1131-00

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11600 Sherman Way

North Hollywood, CA

TEG Project #950123CM

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	MLG4 RT	MLG4 AREA	MLG4 RT	MLG4 AREA	MLG2 RT	MLG2 AREA	MLG2 RT	MLG2 AREA	MLG2 RT	MLG2 AREA
DATE	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95
ANALYSIS TIME	10:31	10:31	11:04	11:04	11:35	11:35	12:03	12:03	12:34	12:34
SAMPLING DEPTH (feet)	150	150	200	200	50	50	100	100	150	150
VOLUME WITHDRAWN (L)	51	51	91	91	6	6	23	23	51	51
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	4.6	674.0	nd	nd	4.5	1,658.1	4.5	4,583.1
1,1 DICHLORO ETHENE	3.1	71.2	3.1	81.4	nd	nd	3.1	33.7	3.1	75.4
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	5.3	5.1	nd	nd	5.2	4.5	5.3	23.0
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	6.1	7,765.1	6.1	12,321.5	nd	nd	6.0	4,821.3	6.1	15,092.2
TRICHLORO ETHENE (PID)	7.8	148.1	--	--	7.8	7.9	7.7	49.8	7.8	209.5
TETRACHLORO ETHENE (PID)	nd	nd	11.7	10.1	nd	nd	11.7	19.1	11.7	32.1
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	--	--	4.6	11.9	--	--	--	--	--	--
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	--	--	--	--	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



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VOIATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
AREA COUNTS

	MLG2 RT	MLG2 AREA	MLG3 RT	MLG3 AREA	MLG3 RT	MLG3 AREA	MLG3 RT	MLG3 AREA	MLG3 RT	MLG3 AREA
DATE	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95
ANALYSIS TIME	13:04	13:04	13:34	13:34	14:00	14:00	14:25	14:25	14:54	14:54
SAMPLING DEPTH (feet)	200	200	50	50	100	100	150	150	200	200
VOLUME WITHDRAWN (L)	91	91	6	6	23	23	51	51	91	91
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	4.5	4,020.4	4.5	4,578.6	4.5	8,360.9
1,1 DICHLORO ETHENE	3.1	69.8	3.1	8.0	3.1	37.3	3.1	40.9	3.1	103.2
1,2 DICHLORO ETHANE	4.5	3,680.5	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	5.3	43.0	nd	nd	5.3	5.3	5.2	5.7	5.2	25.2
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	6.1	15,808.6	6.1	1,530.7	6.1	6,258.1	6.0	7,606.2	--	--
TRICHLORO ETHENE (PID)	--	--	7.8	40.1	7.8	76.9	7.7	88.7	--	--
TETRACHLORO ETHENE (PID)	11.7	17.6	nd	nd	11.7	7.1	11.7	8.3	11.7	18.3
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--	3.3	8.0
TRICHLORO ETHENE (FID)	4.7	29.1	--	--	--	--	--	--	4.6	51.2
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ACETONE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



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North Hollywood, CA

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES
AREA COUNTS

	MLG6 RT	MLG6 AREA	MLG6 RT	MLG6 AREA	MLG6 RT	MLG6 AREA	MLG6 RT	MLG6 AREA	MLG6 DUP RT	MLG6 DUP AREA
DATE	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95	01/24/95
ANALYSIS TIME	15:25	15:25	15:56	15:56	16:23	16:23	16:58	16:58	17:30	17:30
SAMPLING DEPTH (feet)	50	50	100	100	150	150	200	200	200	200
VOLUME WITHDRAWN (L)	6	6	23	23	51	51	91	91	91	91
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	6.4	2,326.5	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	4.6	932.8	4.5	1,961.6	4.5	1,538.9	4.5	1,837.5
1,1 DICHLORO ETHENE	3.1	8.1	3.1	105.2	3.1	166.7	3.1	99.6	3.1	112.1
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	5.3	5.3	5.3	8.6	5.3	10.1
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	6.1	2,673.5	6.1	18,376.9	6.1	21,134.9	6.1	10,856.4	6.0	16,104.0
TRICHLORO ETHENE (PID)	7.8	11.0	7.8	91.6	--	--	--	--	--	--
TETRACHLORO ETHENE (PID)	nd	nd	nd	nd	11.7	10.1	11.7	7.5	11.7	10.4
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	nd	nd	--	--	--	--
TRICHLORO ETHENE (FID)	--	--	--	--	4.6	11.2	4.6	23.8	4.6	29.7
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ACETONE

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1657)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	BLANK RT	BLANK AREA	GW7 RT	GW7 AREA	GW7 RT	GW7 AREA	GW7 DUP RT	GW7 DUP AREA	MLG1 RT	MLG1 AREA	MLG1 RT	MLG1 AREA
DATE	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95
ANALYSIS TIME	06:19	06:19	07:48	07:48	08:18	08:18	08:46	08:46	09:17	09:17	09:44	09:44
SAMPLING DEPTH (feet)	--	--	50	50	150	150	150	150	50	50	100	100
VOLUME WITHDRAWN (L)	20	20	1.5	1.5	13	13	13	13	6	6	23	23
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5.7	2,789.3
1,1 DICHLORO ETHANE	nd	nd	nd	nd	4.5	1,161.9	4.5	1,487.6	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	nd	3.1	12.3	3.1	26.4	3.1	32.5	nd	nd	nd	nd
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	5.2	5.1	5.2	6.2	nd	nd	5.2	139.9
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	nd	nd	6.1	1,441.0	6.1	4,766.1	6.0	6,113.5	nd	nd	nd	nd
TRICHLORO ETHENE (PID)	nd	nd	--	--	--	--	--	--	7.8	76.5	--	--
TETRACHLORO ETHENE (PID)	nd	nd	11.7	9.5	11.7	20.5	11.6	27.1	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	nd	nd	--	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	nd	nd	4.6	28.1	4.6	64.5	4.6	74.5	--	--	4.6	638.3
TETRACHLORO ETHENE (FID)	nd	nd	--	--	--	--	--	--	--	--	--	--
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6.5	18.5
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	14.2	39.3
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	10.4	450.1
m&p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	14.5	121.1
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	15.6	23.0

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* INDICATES THAT THE ANALYTE WAS QUANTIFIED FROM A 0.1CC INJECTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



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North Hollywood, CA

TEG Project #950123CM

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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (BPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	MLG1 RT	MLG1 AREA	MLG1 RT	MLG1 AREA	GW10 RT	GW10 AREA	GW10 RT	GW10 AREA	GW8 RT	GW8 AREA	GW8 RT	GW8 AREA
DATE	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95
ANALYSIS TIME	10:23	10:23	11:01	11:01	11:27	11:27	11:55	11:55	12:24	12:24	12:50	12:50
SAMPLING DEPTH (feet)	150	150	200	200	50	50	150	150	50	50	150	150
VOLUME WITHDRAWN (L)	51	51	91	91	1.5	1.5	13	13	1.5	1.5	13	13
VOLUME INJECTED	1	1	0.1	0.1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	10	10	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLOROFORM	5.8	24,000.8	5.8	661.8	nd	nd	5.8	1,734.0	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	nd	nd	3.1	6.5	nd	nd	3.1	44.3	3.1	15.6	3.1	22.5
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	5.3	97.2	nd	nd	nd	nd	5.2	31.9	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALI)	nd	nd	6.1	904.5	nd	nd	6.0	3,748.6	6.1	899.5	6.0	710.0
TRICHLORO ETHENE (PID)	--	--	--	--	7.7	48.5	--	--	7.7	19.8	7.7	48.7
TETRACHLORO ETHENE (PID)	11.7	6.3	nd	nd	nd	nd	11.7	14.7	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	--	--	--	--	--	--	--	--	--	--	--	--
TRICHLORO ETHENE (FID)	4.6	677.5	4.6	19.6	--	--	4.6	232.5	--	--	--	--
TETRACHLORO ETHENE (FID)	--	--	--	--	--	--	--	--	--	--	--	--
BENZENE	6.6	18.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	14.2	30.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	10.4	328.9	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m&p-XYLENES	14.6	107.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	15.7	11.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* INDICATES THAT THE ANALYTE WAS QUANTIFIED FROM A 0.1CC INJECTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



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VOLATILE HALOGENATED AND AROMATIC HYDROCARBONS (EPA Method 8010/8020) SOIL VAPOR ANALYSES

AREA COUNTS

	GW9 RT	GW9 AREA	GW9 RT	GW9 AREA	MLG8 RT	MLG8 AREA	MLG8 RT	MLG8 AREA	MLG8 RT	MLG8 AREA	MLG8 RT	MLG8 AREA
DATE	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95	01/25/95
ANALYSIS TIME	13:19	13:19	13:45	13:45	14:41	14:41	15:06	15:06	15:46	15:46	16:20	16:20
SAMPLING DEPTH (feet)	50	50	150	150	50	50	100	100	150	150	200	200
VOLUME WITHDRAWN (L)	1.5	1.5	13	13	6	6	23	23	51	51	91	91
VOLUME INJECTED	1	1	1	1	1	1	1	1	1	1	1	1
DILUTION FACTOR	1	1	1	1	1	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	nd	nd	nd	nd	nd	nd	nd	nd	6.3	1,403.0	6.3	2,539.2
CHLOROFORM	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1 DICHLORO ETHENE	3.1	42.5	*3.1	*23.9	3.1	7.7	3.1	39.2	3.1	52.6	3.1	57.7
1,2 DICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 TR DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2 CIS DICHLORO ETHENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DICHLOROMETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2 TRICHLORO ETHANE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (HALL)	6.1	3,906.9	*6.0	*1,796.0	6.1	944.5	6.1	3,513.6	6.0	3,804.8	6.1	3,441.5
TRICHLORO ETHENE (PID)	7.7	32.7	7.7	377.1	nd	nd	7.7	11.7	7.7	88.1	nd	nd
TETRACHLORO ETHENE (PID)	11.7	58.6	11.7	168.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1 TRICHLORO ETHANE (FID)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLORO ETHENE (FID)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TETRACHLORO ETHENE (FID)	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.6	8.9
BENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ETHYLBENZENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOLUENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
m,p-XYLENES	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
o-XYLENE	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

ND INDICATES NOT DETECTED AT DETECTION LIMIT OF 1.0 UG/L-VAPOR FOR EACH COMPOUND

* INDICATES THAT THE ANALYTE WAS QUANTIFIED FROM A 0.1CC INJECTION

ANALYSES PERFORMED ON-SITE IN TEG'S DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE PREPARATION DATE: 01/17/95

LAB: TEG CRUISEMASTER

INSTRUMENT: GC14A - LEFT AND RIGHT

LOW STANDARD

MID STANDARD

HIGH STANDARD

COMPOUND	DETECTOR	RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF	AVE RF	%RSD
1,1,1 Trichloro Ethane	FID-L	1.7	250	50	0.199	1.7	1000	204	0.204	1.7	10,000	2055	0.205	0.203	1.6%
Trichloro Ethene	FID-L	2.5	250	51	0.203	2.5	1000	203	0.203	2.5	10,000	2096	0.210	0.205	1.8%
TetraChloro Ethene	FID-L	5.1	250	43	0.172	5.1	1000	168	0.168	5.1	10,000	1770	0.177	0.172	2.6%
1,1,1 Trichloro Ethane	FID-R	3.2	250	52	0.210	3.2	1000	206	0.206	3.2	10,000	1943	0.194	0.203	4.0%
Trichloro Ethene	FID-R	4.5	250	52	0.209	4.5	1000	201	0.201	4.5	10,000	1935	0.194	0.201	3.8%
TetraChloro Ethene	FID-R	8.1	250	44	0.175	8.1	1000	166	0.166	8.1	10,000	1658	0.166	0.169	3.2%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOMS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS INITIAL LCS STANDARD REPORT

DATE: 01/17/95

SUPPLY SOURCE: CHEMSERVE HVOC/AVOC MIX 7/1/94 LOT# 105-31A & 110-83B

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A- LEFT AND RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
1,1,1 Trichloro ethane	FID-LEFT	0.203	1000	1.7	194	0.194	4.2%
Trichloro ethene	FID-LEFT	0.205	1000	2.5	201	0.201	1.7%
Tetrachloro ethene	FID-LEFT	0.172	1000	5.1	162	0.162	6.1%
1,1,1 Trichloro ethane	FID-RIGHT	0.203	2000	3.3	440	0.220	8.5%
Trichloro ethene	FID-RIGHT	0.201	1000	4.5	192	0.192	4.4%
Tetrachloro ethene	FID-RIGHT	0.169	1000	8.1	160	0.160	5.5%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOES CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE PREPARATION DATE: 01/04/95, FREONS 11, 12, VINYL CHLORIDE, CHLOROETHANE 09/14/94

LAB: TEG CRUISEMASTER
INSTRUMENT: GC14-RIGHT

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				AVE RF	%RSD
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF		
CARBON TETRACHLORIDE	HALL	6.2	5	4186	837.3	6.2	10	7909	790.9	6.2	25	18493	739.7	789.3	6.2%
CHLOROFORM	HALL	5.6	5	2963	592.5	5.6	10	5926	592.6	5.6	25	15222	608.9	598.0	1.6%
DICHLOROMETHANE	HALL	3.5	5	2952	590.5	3.5	10	5912	591.2	3.5	25	14313	572.5	584.7	1.8%
1,1 DICHLORO ETHANE	HALL	4.4	5	2748	549.6	4.4	10	5433	543.3	4.4	25	13839	553.5	548.8	0.9%
1,2 DICHLORO ETHANE	HALL	6.5	5	3758	751.7	6.5	10	6740	674.0	6.5	25	16198	647.9	691.2	7.8%
1,1 DICHLORO ETHENE	PID	2.9	5	26	5.1	2.9	10	44	4.4	3.0	25	99	4.0	4.5	13.5%
Cis 1,2 DICHLORO ETHENE	PID	5.1	5	30	5.9	5.1	10	52	5.2	5.1	25	117	4.7	5.3	12.2%
Tr 1,2 DICHLORO ETHENE	PID	3.8	5	51	10.1	3.8	10	89	8.9	3.8	25	195	7.8	8.9	13.1%
TETRACHLORO ETHANE (1112)	HALL	14.0	5	3793	758.6	14.0	10	6867	686.7	14.0	25	18435	737.0	727.5	5.1%
TETRACHLORO ETHANE (1122)	HALL	17.6	5	2898	579.7	17.6	10	5921	592.1	17.6	25	16932	677.3	616.3	8.6%
TETRACHLORO ETHENE	PID	11.5	5	30	6.0	11.5	10	53	5.3	11.5	25	118	4.7	5.3	11.4%
1,1,1 TRICHLORO ETHANE	HALL	5.9	5	3059	611.7	5.9	10	6020	602.0	5.9	25	14796	591.8	601.9	1.7%
1,1,1 TRICHLORO ETHANE	PID	3.5	500	76	0.153	3.5	2500	477	0.191	3.5	10000	1739	0.174	0.173	11.0%
1,1,2 TRICHLORO ETHANE	HALL	11.3	5	2288	457.7	11.3	10	4705	470.5	11.3	25	12943	517.7	482.0	6.6%
TRICHLORO ETHENE	PID	7.6	5	35	7.0	7.6	10	62	6.2	7.6	25	140	5.6	6.2	11.0%
VINYL CHLORIDE	HALL	2.0	5	808	161.5	1.9	25	3612	144.5	1.9	50	7404	148.1	151.4	5.9%
FREON 11	HALL	2.6	5	1500	300.0	2.6	25	6051	242.0	2.6	50.0	9925	198.5	246.8	20.6%
FREON 12	HALL	1.6	5	823	164.6	1.6	25	3882	155.3	1.6	50.0	7202	144.0	154.6	6.7%
FREON 113	HALL	3.0	10	4088	408.8	3.0	20	7791	389.6	3.0	50	19538	390.8	396.4	2.7%
CHLOROETHANE	HALL	2.4	5	417	83.5	2.3	10	658	65.8	2.3	50.0	2577	51.5	66.9	23.9%
BENZENE	PID	6.4	5	60	12.0	6.4	10	109	10.9	6.4	25	244	9.7	10.9	10.3%
CHLOROBENZENE	PID	13.7	5	68	13.7	13.7	10	127	12.7	13.7	25	276	11.0	12.5	10.8%
ETHYLBENZENE	PID	14.0	5	60	12.0	14.0	10	109	10.9	14.1	25	240	9.6	10.8	11.0%
TOLUENE	PID	10.2	5	60	11.9	10.2	10	108	10.8	10.2	25	233	9.3	10.7	12.1%
m&p-XYLENES	PID	14.4	10	133	13.3	14.4	20	235	11.8	14.4	50	526	10.5	11.9	11.8%
o-XYLENES	PID	15.5	5	59	11.7	15.5	10	107	10.7	15.5	25	234	9.4	10.6	11.1%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS INITIAL LCS STANDARD REPORT

DATE: 01/04/95, FREONS 11&12, VINYL CHLORIDE, CHLOROETHANE 09/14/94
SUPPLY SOURCE: CHEMSEVERE HVOC/AVOC MIX 7/1/94 LOT# 105-31A & 110-83B
INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	789.3	10	6.2	6819	681.9	13.6%
CHLOROFORM	HALL	598.0	10	5.7	5105	510.5	14.6%
DICHLORO ETHANE (11)	HALL	546.8	10	4.4	5009	500.9	8.7%
DICHLORO ETHANE (12)	HALL	691.2	10	6.5	5689	568.9	17.7%
DICHLORO ETHENE (11)	PID	4.5	10	2.9	40	4.0	11.1%
DICHLORO ETHENE (12 CIS)	PID	5.3	10	5.1	49	4.9	7.3%
DICHLORO ETHENE (12 TRANS)	PID	8.9	10	3.8	83	8.3	6.8%
DICHLOROMETHANE	HALL	584.7	10	3.5	5171	517.1	11.6%
TetraCHLORO ETHANE (1112)	HALL	727.5	10	14.0	6543	654.3	10.1%
TetraCHLORO ETHANE (1122)	HALL	616.3	10	17.6	5221	522.1	15.3%
TetraCHLORO ETHENE	PID	5.3	10	11.5	49	4.9	6.8%
TrichLORO ETHANE (111)	HALL	601.9	10	5.9	5141	514.1	14.6%
TrichLORO ETHANE (112)	HALL	482.0	10	11.3	4398	439.8	8.8%
TrichLORO ETHENE	PID	6.2	10	7.6	59	5.9	4.9%
FREON 11	HALL	246.8	25	2.6	5724	229.0	7.2%
FREON 12	HALL	154.6	21	1.7	3015	143.6	7.1%
FREON 113	HALL	396.4	20	3.0	6899	345.0	13.0%
VINYL CHLORIDE	HALL	151.4	25	1.9	3951	158.0	4.4%
CHLOROETHANE	HALL	66.9	10	2.3	717	71.7	7.2%
BENZENE	PID	10.9	10	6.4	97	9.7	11.2%
CHLOROBENZENE	PID	12.5	10	13.7	119	11.9	5.2%
ETHYLBENZENE	PID	10.8	10	14.1	100	10.0	7.8%
TOLUENE	PID	10.7	10	10.2	98	9.8	8.5%
m&p-XYLENES	PID	11.9	20	14.4	220	11.0	7.7%
o-XYLENES	PID	10.6	10	15.5	100	10.0	5.7%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS CONTINUING CALIBRATION STANDARD REPORT

DATE: 01/23/95

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	789.3	10	6.3	7841	784.1	0.7%
CHLOROFORM	HALL	598.0	10	5.7	6448	644.8	7.8%
DICHLORO ETHANE (11)	HALL	548.8	10	4.5	5786	578.6	5.4%
DICHLORO ETHANE (12)	HALL	691.2	10	6.7	6094	609.4	11.8%
DICHLORO ETHENE (11)	PID	4.5	10	3.0	44	4.4	2.4%
DICHLORO ETHENE (12 CIS)	PID	5.3	10	5.2	50	5.0	5.7%
DICHLORO ETHENE (12 TRANS)	PID	8.9	10	3.9	78	7.8	12.8%
DICHLOROMETHANE	HALL	584.7	10	3.6	5607	560.7	4.1%
Tetrachloro ETHANE (1112)	HALL	727.5	10	14.2	6722	672.2	7.6%
Tetrachloro ETHANE (1122)	HALL	616.3	10	17.8	5507	550.7	10.6%
Tetrachloro ETHENE	PID	5.3	10	11.7	48	4.8	9.1%
Trichloro ETHANE (111)	HALL	601.9	10	6.0	6329	632.9	5.1%
Trichloro ETHANE (112)	HALL	482.0	10	11.5	5535	553.5	14.8%
Trichloro ETHENE	PID	5.6	10	7.7	57	5.7	2.1%
Trichloro ETHENE (111)	FID	0.203	2000	3.3	461	0.2	13.6%
Trichloro ETHENE	FID	0.201	1000	4.5	201	0.2	0.0%
Tetrachloro ETHENE	FID	0.169	1000	8.1	165	0.2	2.3%
BENZENE	PID	10.9	10	6.5	109	10.9	0.1%
CHLOROBENZENE	PID	12.5	10	13.9	110	11.0	11.6%
ETHYLBENZENE	PID	10.8	10	14.2	94	9.4	12.9%
TOLUENE	PID	10.7	10	10.4	96	9.6	10.0%
m&p-XYLENES	PID	11.9	20	14.6	223	11.1	6.3%
o-XYLENES	PID	10.6	10	15.7	98	9.8	8.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS LCS REPORT

DATE: 01/23/95

SUPPLY SOURCE: CHEMSEVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	789.3	10	5.3	7010	701.0	11.2%
CHLOROPFORM	HALL	598.0	10	5.7	5564	556.4	7.0%
DICHLORO ETHANE (11)	HALL	548.8	10	4.4	5783	578.3	5.4%
DICHLORO ETHANE (12)	HALL	691.2	10	6.7	6005	600.5	13.1%
DICHLORO ETHENE (11)	PID	4.5	10	3.0	36	3.6	19.6%
DICHLORO ETHENE (12 CIS)	PID	5.3	10	5.3	43	4.3	18.8%
DICHLORO ETHENE (12 TRANS)	PID	8.9	10	3.9	72	7.2	18.8%
DICHLOROMETHANE	HALL	584.7	10	3.6	5316	531.6	9.1%
Tetrachloro ETHANE (1112)	HALL	727.5	10	14.3	6826	682.6	6.2%
Tetrachloro ETHANE (1122)	HALL	616.3	10	17.8	6914	691.4	12.2%
Tetrachloro ETHENE	PID	5.3	10	11.7	45	4.5	14.7%
Trichloro ETHANE (111)	HALL	601.9	10	6.0	5640	564.0	6.3%
Trichloro ETHANE (112)	HALL	482.0	10	11.5	5113	511.3	6.1%
Trichloro ETHENE	PID	6.2	10	7.7	54	5.4	13.4%
Trichloro ETHANE (111)	FID	0.203	1000	3.2	229	0.229	12.8%
Trichloro ETHENE	FID	0.201	1000	4.6	226	0.226	12.2%
Tetrachloro ETHENE	FID	0.169	1000	8.2	187	0.187	10.6%
BENZENE	PID	10.9	10	6.6	95	9.5	13.3%
CHLOROBENZENE	PID	12.5	10	13.9	106	10.6	15.4%
ETHYLBENZENE	PID	10.8	10	14.3	90	9.0	16.5%
TOLUENE	PID	10.7	10	10.4	92	9.2	13.8%
m&p-XYLENES	PID	11.9	20	14.6	200	10.0	16.1%
o-XYLENES	PID	10.6	10	15.7	90	9.0	15.2%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE PREPARATION DATE:01/24/95

LAB: TEG CRUISEMASTER

INSTRUMENT: GC14A - LEFT

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				AVE RF	ARSD
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF		
ACETONE	PID	3.8	5	118	23.7	3.8	10	222	22.2	3.8	25	627	25.1	23.6	6.2%

SOIL GAS INITIAL LCS STANDARD REPORT

DATE: 01/24/95

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A- LEFT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
ACETONE	PID	23.6	10	3.8	227	22.7	3.7%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



CALIBRATION CURVE PREPARATION DATE: 01/24/95, FREONS 11, 12, VINYL CHLORIDE, CHLOROETHANE 09/14/94

LAB: TEG CRUISEMASTER
INSTRUMENT: GC14-RIGHT

COMPOUND	DETECTOR	LOW STANDARD				MID STANDARD				HIGH STANDARD				AVE RP	%RSD
		RT	MASS	AREA	RF	RT	MASS	AREA	RF	RT	MASS	AREA	RF		
CARBON TETRACHLORIDE	HALL	6.3	5	2579	515.9	6.3	10	5300	530.0	6.2	25	16912	676.5	574.1	15.5%
CHLOROFORM	HALL	5.8	5	2031	406.2	5.8	10	4325	432.5	5.6	25	14052	562.1	467.0	17.9%
DICHLOROMETHANE	HALL	3.6	5	2169	433.8	3.6	10	4321	432.1	3.5	25	12787	511.5	459.1	9.0%
1,1 DICHLORO ETHANE	HALL	4.5	5	2040	408.1	4.5	10	4053	405.3	4.3	25	12737	509.5	441.0	13.5%
1,2 DICHLORO ETHANE	HALL	6.7	5	2453	490.5	6.7	10	4795	479.5	6.6	25	14542	581.7	517.2	10.8%
1,1 DICHLORO ETHENE	PID	3.0	5	18	3.7	3.0	10	33	3.3	2.9	25	94	3.8	3.6	7.4%
Cis 1,2 DICHLORO ETHENE	PID	5.2	5	21	4.3	5.2	10	39	3.9	5.1	25	121	4.8	4.4	10.4%
Tr 1,2 DICHLORO ETHENE	PID	3.9	5	34	6.8	3.9	10	66	6.6	3.7	25	185	7.4	7.0	5.5%
TETRACHLORO ETHANE (1112)	HALL	14.2	5	2689	537.9	14.2	10	5278	527.8	14.2	25	16183	647.3	571.0	11.6%
TETRACHLORO ETHANE (1122)	HALL	17.8	5	2262	452.4	17.8	10	4558	455.8	17.8	25	15382	615.3	507.8	18.3%
TETRACHLORO ETHENE	PID	11.7	5	21	4.2	11.7	10	43	4.3	11.7	25	127	5.1	4.5	11.0%
1,1,1 Trichloro ETHANE	HALL	6.0	5	2068	413.5	6.0	10	4205	420.5	5.9	25	13988	559.5	464.5	17.7%
1,1,2 Trichloro ETHANE	HALL	11.5	5	1844	368.9	11.5	10	3957	395.7	11.4	25	13016	520.6	428.4	18.9%
Trichloro ETHENE	PID	7.7	5	24	4.9	7.7	10	49	4.9	7.7	25	148	5.9	5.2	11.2%
VINYL CHLORIDE	HALL	2.0	5	808	161.5	1.9	25	3612	144.5	1.9	50	7404	148.1	151.4	5.9%
FREON 11	HALL	2.6	5	1500	300.0	2.6	25	6051	242.0	2.6	50.0	9925	198.5	246.8	20.6%
FREON 12	HALL	1.6	5	823	164.6	1.6	25	3882	155.3	1.6	50.0	7202	144.0	154.6	6.7%
FREON 113	HALL	3.1	10	3015	301.5	3.1	20	5564	278.2	2.9	50	18106	362.1	313.9	13.8%
CHLOROETHANE	HALL	2.4	5	417	83.5	2.3	10	658	65.8	2.3	50.0	2577	51.5	66.9	23.9%
BENZENE	PID	6.6	5	43	8.7	6.6	10	84	8.4	6.5	25	261	10.4	9.1	12.2%
CHLOROBENZENE	PID	13.8	5	51	10.1	13.9	10	99	9.9	13.9	25	287	11.5	10.5	8.2%
ETHYLBENZENE	PID	14.3	5	43	8.6	14.3	10	85	8.5	14.2	25	253	10.1	9.1	10.1%
TOLUENE	PID	10.4	5	44	8.7	10.4	10	85	8.5	10.4	25	259	10.4	9.2	11.0%
m,p-XYLENES	PID	14.6	10	95	9.5	14.6	20	190	9.5	14.6	50	556	11.1	10.0	9.5%
o-XYLENES	PID	15.7	5	42	8.4	15.7	10	82	8.2	15.7	25	247	9.9	8.8	10.2%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DONS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MDSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS INITIAL LCS STANDARD REPORT

DATE: 01/24/95, FREONS 11&12, VINYL CHLORIDE, CHLOROETHANE 09/14/94
SUPPLY SOURCE: CHEMSEARVE HVOC/AVOC MIX 7/1/94 LOT# 105-31A & 110-83B
INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	574.1	10	6.3	5181	518.1	9.8%
CHLOROFORM	HALL	467.0	10	5.8	4346	434.6	6.9%
DICHLORO ETHANE (11)	HALL	441.0	10	4.5	4062	406.2	7.9%
DICHLORO ETHANE (12)	HALL	517.2	10	6.7	4600	460.0	11.1%
DICHLORO ETHENE (11)	PID	3.6	10	3.0	31	3.1	14.9%
DICHLORO ETHENE (12 CIS)	PID	4.4	10	5.2	40	4.0	9.6%
DICHLORO ETHENE (12 TRANS)	PID	7.0	10	3.9	65	6.5	6.6%
DICHLOROMETHANE	HALL	459.1	10	3.6	4139	413.9	9.9%
TETRACHLORO ETHANE (1112)	HALL	571.0	10	14.2	5247	524.7	8.1%
TETRACHLORO ETHANE (1122)	HALL	507.8	10	17.8	4656	465.6	8.9%
TETRACHLORO ETHENE	PID	4.5	10	11.7	42	4.2	6.6%
TRICHLORO ETHANE (111)	HALL	464.5	10	6.0	4032	403.2	13.2%
TRICHLORO ETHANE (112)	HALL	428.4	10	11.5	3844	384.4	10.3%
TRICHLORO ETHENE	PID	5.2	10	7.7	48	4.8	6.8%
FREON 11	HALL	246.8	25	2.6	5724	229.0	7.2%
FREON 12	HALL	154.6	21	1.7	3015	143.6	7.1%
FREON 113	HALL	313.9	20	3.1	5296	264.8	15.6%
VINYL CHLORIDE	HALL	151.4	25	1.9	3951	158.0	4.4%
CHLOROETHANE	HALL	66.9	10	2.3	717	71.7	7.2%
BENZENE	PID	9.1	10	6.6	87	8.7	4.9%
CHLOROBENZENE	PID	10.5	10	13.9	101	10.1	4.1%
ETHYLBENZENE	PID	9.1	10	14.2	85	8.5	6.8%
TOLUENE	PID	9.2	10	10.4	83	8.3	9.6%
m&p-XYLENES	PID	10.0	20	14.6	192	9.6	4.1%
o-XYLENES	PID	8.8	10	15.7	84	8.4	4.2%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOES CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS CONTINUING CALIBRATION STANDARD REPORT

DATE: 01/24/95

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
Trichloro ETHANE (111)	FID	0.203	2000	3.4	426	0.213	5.0%
Trichloro ETHENE	FID	0.201	1000	4.6	184	0.184	8.4%
TetraChloro ETHENE	FID	0.169	1000	6.2	152	0.152	10.1%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS LCS REPORT

DATE: 01/24/95

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	574.1	10	6.3	6091	609.1	6.1%
CHLOROFORM	HALL	467.0	10	5.7	4859	485.9	4.0%
DICHLORO ETHANE (11)	HALL	441.0	10	4.5	4421	442.1	0.3%
DICHLORO ETHANE (12)	HALL	517.2	10	6.7	5247	524.7	1.4%
DICHLORO ETHENE (11)	PID	3.6	10	3.0	36	3.6	0.7%
DICHLORO ETHENE (12 CIS)	PID	4.4	10	5.2	45	4.5	3.1%
DICHLORO ETHENE (12 TRANS)	PID	7.0	10	3.9	74	7.4	5.6%
DICHLOROMETHANE	HALL	459.1	10	3.6	4389	438.9	4.4%
TetraCHLORO ETHANE (1112)	HALL	571.0	10	14.2	5978	597.8	4.7%
TetraCHLORO ETHANE (1122)	HALL	507.8	10	17.8	5194	519.4	2.3%
TetraCHLORO ETHENE	PID	4.5	10	11.7	47	4.7	5.3%
TrichLORO ETHANE (1111)	HALL	464.3	10	6.0	4660	466.0	0.3%
TrichLORO ETHANE (112)	HALL	428.4	10	11.5	4264	426.4	0.5%
TrichLORO ETHENE	PID	5.2	10	7.7	55	5.5	6.4%
TrichLORO ETHANE (111)	FID	0.203	1000	3.3	193	0.193	5.1%
TrichLORO ETHENE	FID	0.201	1000	4.6	193	0.193	3.9%
TetraCHLORO ETHENE	FID	0.169	1000	8.2	159	0.159	5.7%
BENZENE	PID	9.1	10	6.6	95	9.5	4.9%
CHLOROBENZENE	PID	10.5	10	13.9	115	11.5	9.1%
ETHYLBENZENE	PID	9.1	10	14.3	96	9.6	6.0%
TOLUENE	PID	9.2	10	10.4	98	9.8	6.2%
m&p-XYLENES	PID	10.0	20	14.6	215	10.8	7.7%
o-XYLENES	FID	8.8	10	15.7	96	9.6	9.0%
ACETONE	PID	23.6	10	3.8	221	22.1	6.4%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS DAILY CONTINUING CALIBRATION STANDARD REPORT

DATE: 01/25/95

SUPPLY SOURCE: TEG RWQCB MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	574.1	10	6.3	6556	655.6	14.2%
CHLOROFORM	HALL	467.0	10	5.7	5052	505.2	8.2%
DICHLORO ETHANE (11)	HALL	441.0	10	4.5	4846	484.6	9.9%
DICHLORO ETHANE (12)	HALL	517.2	10	6.7	5255	525.5	1.6%
DICHLORO ETHENE (11)	PID	3.6	10	3.0	36	3.6	0.7%
DICHLORO ETHENE (12 CIS)	PID	4.4	10	5.2	45	4.5	3.3%
DICHLORO ETHENE (12 TRANS)	PID	7.0	10	3.9	74	7.4	5.5%
DICHLOROMETHANE	HALL	459.1	10	3.6	5047	504.7	9.9%
TETRACHLORO ETHANE (1112)	HALL	571.0	10	14.2	6449	644.9	12.9%
TETRACHLORO ETHANE (1122)	HALL	507.8	10	17.8	5489	548.9	8.1%
TETRACHLORO ETHENE	FID	4.5	10	11.7	47	4.7	3.4%
TRICHLORO ETHANE (111)	HALL	464.5	10	6.0	5266	526.6	13.4%
TRICHLORO ETHANE (112)	HALL	428.4	10	11.5	4837	483.7	12.9%
TRICHLORO ETHENE	PID	5.2	10	7.7	54	5.4	4.1%
TRICHLORO ETHANE (111)	FID	0.203	2000	3.3	419	0.210	3.3%
TRICHLORO ETHENE	PID	0.201	1000	4.6	178	0.178	11.3%
TETRACHLORO ETHENE	FID	0.169	1000	8.2	150	0.150	11.4%
BENZENE	FID	9.1	10	6.5	93	9.3	1.7%
CHLOROBENZENE	PID	10.5	10	13.9	114	11.4	8.7%
ETHYLBENZENE	PID	9.1	10	14.3	97	9.7	6.1%
TOLUENE	PID	9.2	10	10.4	96	9.6	4.7%
m,p-XYLENES	PID	10.0	20	14.6	211	10.6	5.5%
o-XYLENES	PID	8.8	10	15.7	97	9.7	10.0%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



SOIL GAS LCS REPORT

DATE: 01/25/95

SUPPLY SOURCE: CHEMSERVE 8021 MIX

INSTRUMENT: CRUISEMASTER SHIMADZU GC14A-RIGHT

COMPOUND	DETECTOR	AVE RF	MASS	RT	AREA	RF	%DIFF
CARBON TETRACHLORIDE	HALL	574.1	10	6.5	6271	627.1	9.2%
CHLOROFORM	HALL	467.0	10	5.8	4805	480.5	2.9%
DICHLORO ETHANE (11)	HALL	441.0	10	4.5	4694	469.4	6.4%
DICHLORO ETHANE (12)	HALL	517.2	10	6.7	5498	549.8	6.3%
DICHLORO ETHENE (11)	PID	3.6	10	3.0	41	4.1	13.5%
DICHLORO ETHENE (12 CIS)	PID	4.4	10	5.2	48	4.8	8.5%
DICHLORO ETHENE (12 TRANS)	PID	7.0	10	3.9	78	7.8	12.1%
DICHLOROMETHANE	HALL	459.1	10	3.6	4597	459.7	0.1%
TetraCHLORO ETHANE (1112)	HALL	571.0	10	14.2	6120	612.0	7.2%
TetraCHLORO ETHANE (1122)	HALL	507.8	10	17.8	5046	504.6	0.6%
TetraCHLORO ETHENE	PID	4.5	10	11.7	49	4.9	8.8%
TrichLORO ETHANE (111)	HALL	464.5	10	6.0	4793	479.3	3.2%
TrichLORO ETHANE (112)	HALL	428.4	10	11.5	4023	402.3	6.1%
TrichLORO ETHENE	PID	5.2	10	7.7	54	5.4	3.8%
TrichLORO ETHANE (111)	FID	0.203	1000	3.3	188	0.188	7.6%
TrichLORO ETHENE	FID	0.201	1000	4.6	185	0.185	8.1%
TetraCHLORO ETHENE	FID	0.159	1000	8.2	154	0.154	8.9%
BENZENE	PID	9.1	10	6.6	96	9.6	5.8%
CHLOROBENZENE	PID	10.5	10	13.9	114	11.4	8.9%
ETHYLBENZENE	PID	9.1	10	14.2	95	9.5	4.4%
TOLUENE	PID	9.2	10	10.4	96	9.6	4.5%
m,p-XYLENES	PID	10.0	20	14.6	213	10.6	6.4%
o-XYLENES	PID	8.8	10	15.6	97	9.7	9.8%
ACETONE	PID	23.6	10	3.8	221	22.1	6.4%

ANALYSES PERFORMED ON-SITE IN TEG'S CA DOHS CERTIFIED MOBILE LABORATORY (CERT #1667)

ANALYSES PERFORMED BY: MR. PAUL MOSHER

DATA REVIEWED BY: DR. BLAYNE HARTMAN



ANALYTICAL PROCEDURES

The following text gives a brief summary of the analytical procedures used. Detailed descriptions are available upon request.

SAMPLE PREPARATION

Waters

Waters are prepared for TPH analysis (gasoline and diesel) and aromatic hydrocarbon analysis (BTEX) by either liquid-liquid extraction with freon 113 using a modified EPA Method 3510 or by purge & trap using EPA method 5030. For volatile chlorinated hydrocarbons, water samples are prepared by purge & trap following EPA Method 5030.

Soils

Soil samples are extracted with methanol for volatile chlorinated hydrocarbon compounds (EPA 8010) and with freon 113 for volatile aromatic hydrocarbon compounds (EPA 8020) and fuel compounds (DOHS approved EPA 8015m) by liquid-solid extraction using a modified EPA method 3550.

GAS CHROMATOGRAPHY

Volatile Chlorinated Hydrocarbons

Water samples and soil extracts are purged in a Tekmar LSC-2000 purge & trap, and backflushed into a Shimadzu 14A gas chromatograph equipped with megabore capillary columns and photoionization detector (PID) and Hall electrolytic detectors following EPA Methods 601/8010 and 602/8020.

Volatile Aromatic Hydrocarbons (BTEX) & Total Fuel Hydrocarbons (TPH)

An aliquot of the soil extract is injected on-column into a Shimadzu gas chromatograph equipped with megabore capillary columns, photoionization (PID) and flame ionization detectors (FID).

TOTAL RECOVERABLE HYDROCARBONS

Extracts are scrubbed with silica gel and measured on a BUCK 404 Infrared Analyzer following EPA 418.1 protocols.

DATA ACQUISITION & PROCESSING

Data from the gas chromatographs are acquired by Peaksimple computer data acquisition system. Separate chromatograms are printed for each detector. The resulting chromatograms are inspected at the end of each run and the data entered into a spreadsheet for on-site processing and evaluation.



SOIL VAPOR SURVEY METHODOLOGY

Probe Construction

TEG's soil vapor probes are constructed of 5/8 inch outer diameter, stainless steel, equipped with a hardened, reverse-threaded steel tip. Nominal lengths are 6 feet although additional lengths may be added. An inert 1/8 inch polypropylene nylaflow tube runs down the center of the probe to sampling ports beneath the tip (refer to the attached figure).

Probe Insertion

The probe is driven into the ground by either an electric rotary hammer or with TEG's truck-mounted hydraulic/vibrational system. Once inserted to the desired depth, the probe is rotated 3 to 5 turns in a clockwise direction, which opens the tip and exposes the vapor sampling ports. This design prevents clogging of the sampling ports and cross-contamination from soils during insertion.

Gas Sampling

Soil vapor is withdrawn from the nylaflow tubing using a syringe connected via an on-off valve. The first 40 cc of gas are discarded to flush the dead volume of the probe and fill it with in-situ soil vapor. The next 20 cc of gas are withdrawn in a syringe, plugged, and immediately transferred to the mobile lab for analysis within 5 minutes of collection. Additional soil vapor may be collected and stored in gas-tight containers as desired.

Flushing & Decontamination Procedures

To minimize the potential for cross-contamination between sites, all probe parts are cleaned of excess dirt and moisture prior to insertion. The nylaflow tubing and sampling ports are flushed with hundreds of cc's of ambient air between samples. If water, dirt, or any material is observed in the tubing, the tubing is replaced with fresh tubing.

Analysis of Soil Vapor

To eliminate loss of gases during storage, collected gas samples are analyzed immediately after collection in TEG's state certified mobile laboratory. One cc of air is injected into a Shimadzu gas chromatograph equipped with megabore capillary columns and with flame ionization, HNU photoionization detector (10.2 ev lamp), and Hall electrolytic conductivity detectors (Tracor model 1000). These detectors enable on-site analysis for landfill hydrocarbons, petroleum hydrocarbons, volatile aromatics (BTEX), and volatile chlorinated compounds (DCE, TCE, PCE, DCA, TCA, PCA) using EPA approved analytical methodology outlined in methods 8010, 8015, & 8020. Output signals from each detector are processed by HP3393A computing integrators or computer chromatography software and the results entered into a laboratory computer for on-site processing and graphing.

Transglobal Environmental Geochemistry

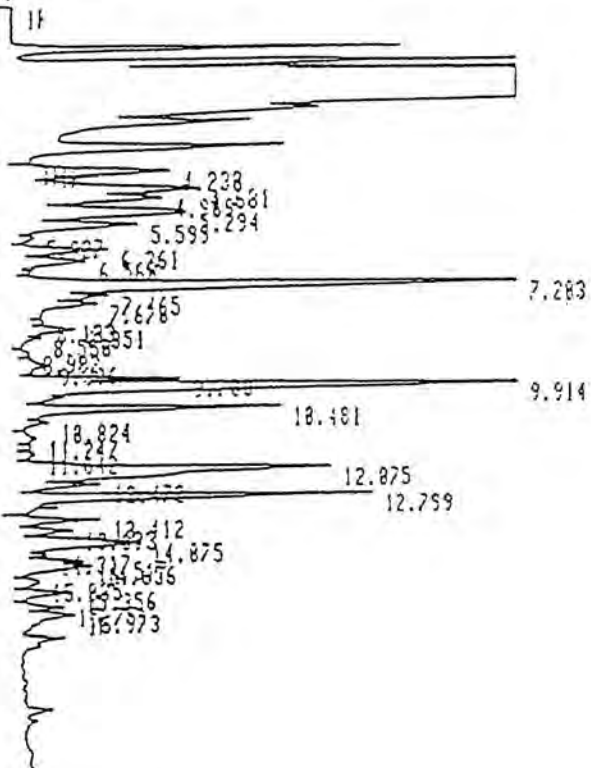
432 N. Cedros Ave., Solana Beach CA 92075 Ph: (619) 793-0401 Fax: (619) 793-0404



TOTAL PETROLEUM HYDROCARBONS (EPA 8015m)

GASOLINE

* RUN# 82 JUL 25, 1998 14:56
START



STOP

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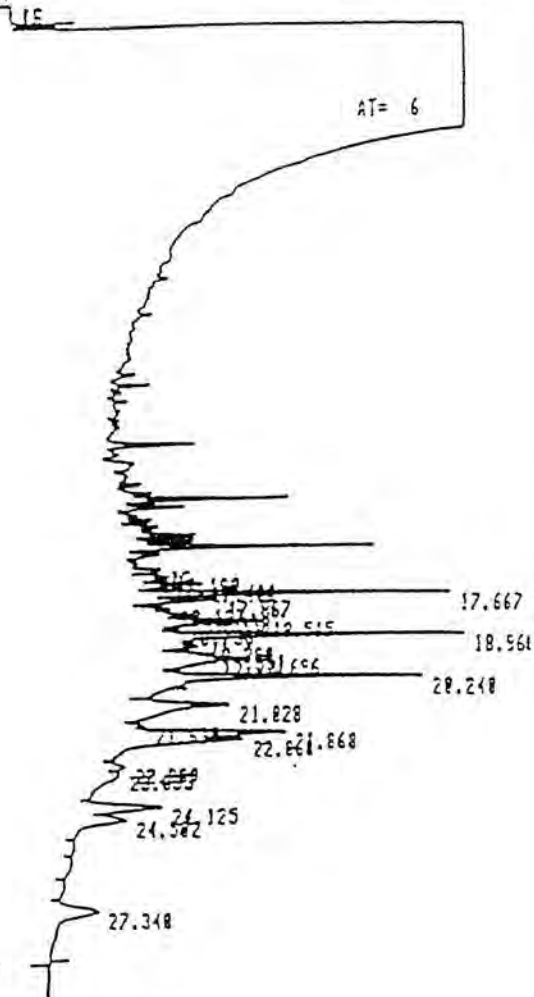
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EPA METHOD 8815

DIESEL

* RUN# 6 SEP 11, 1998 14:15:03
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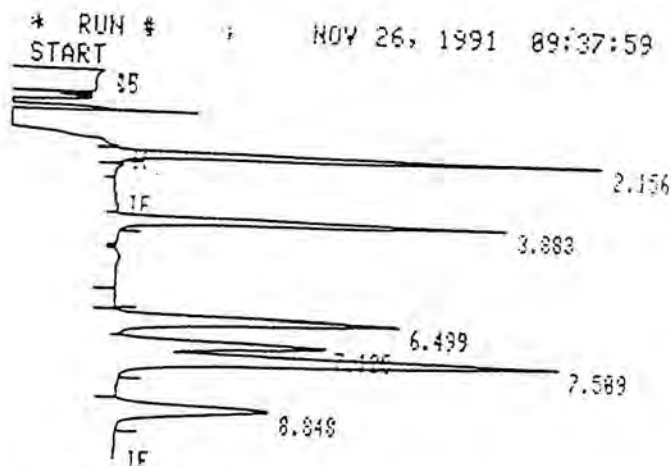
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VOLATILE AROMATIC HYDROCARBONS (EPA 602/8020)



TIMETABLE STOP

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RUN# 4 NOV 26, 1991 09:37:59

SIGNAL FILE: M:SIGNAL.BNC

EPA8020M

ESTD

RT	TYPE	AREA	WIDTH	HEIGHT
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3.883	PB	366894	.137	44456
6.499	BB	387750	.200	32291
7.128	BB	288464	.178	19467
7.589	BB	545349	.200	45373
8.848	BB	278847	.265	17522

RT	CAL#	PPM	SOIL	NAME
2.156	1R	1.195		BENZENE
3.883	2R	1.221		TOLUENE
6.499	3R	1.201		CHLOROBENZ
7.128	4R	1.232		ETHYLBENZ
7.589	5R	2.342		M&P XYLENE
8.848	6R	1.250		O XYLENE

TOTAL AREA=2199569

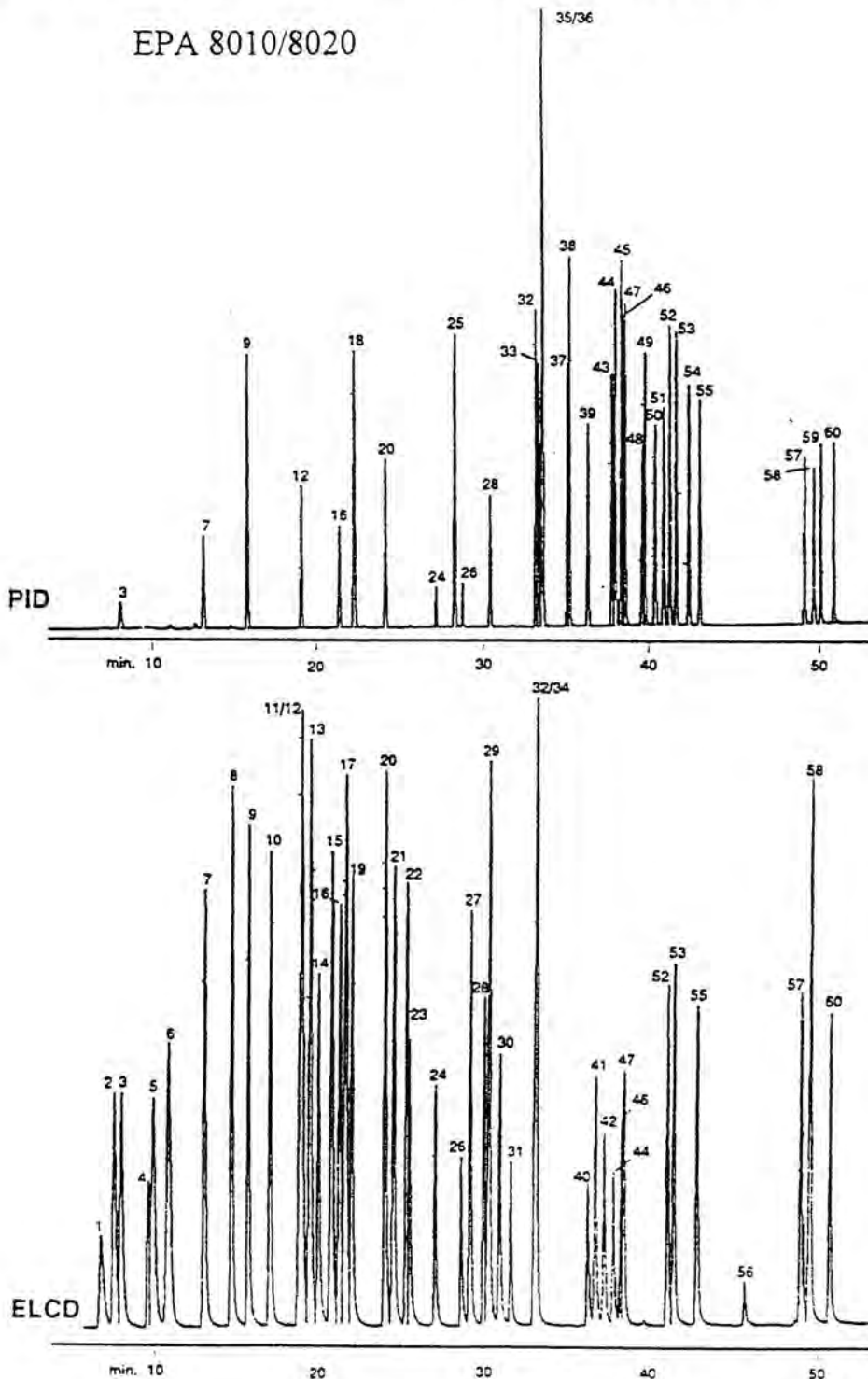
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HALOGENATED & AROMATIC VOLATILE HYDROCARBONS

EPA 8010/8020

- 1 dichlorodifluoromethane
- 2 chloromethane
- 3 vinyl chloride
- 4 bromomethane
- 5 chloroethane
- 6 trichlorofluoromethane
- 7 1,1-dichloroethene
- 8 methylene chloride
- 9 trans-1,2-dichloroethene
- 10 1,1-dichloroethane
- 11 2,2-dichloropropane
- 12 cis-1,2-dichloroethene
- 13 chloroform
- 14 bromochloromethane
- 15 1,1,1-trichloroethane
- 16 1,1-dichloropropene
- 17 carbon tetrachloride
- 18 benzene
- 19 1,2-dichloroethane
- 20 trichloroethene
- 21 1,2-dichloropropane
- 22 bromodichloromethane
- 23 dibromomethane
- 24 cis-1,3-dichloropropene
- 25 toluene
- 26 trans-1,3-dichloropropene
- 27 1,1,2-trichloroethane
- 28 tetrachloroethene
- 29 1,3-dichloropropane
- 30 dibromochloromethane
- 31 1,2-dibromoethane
- 32 chlorobenzene
- 33 ethyl benzene
- 34 1,1,1,2-tetrachloroethane
- 35 m-xylene
- 36 p-xylene
- 37 o-xylene
- 38 styrene
- 39 isopropyl benzene
- 40 bromoform
- 41 1,1,2,2-tetrachloroethane
- 42 1,2,3-trichloropropane
- 43 n-propyl benzene
- 44 bromobenzene
- 45 1,3,5-trimethylbenzene
- 46 2-chlorotoluene
- 47 4-chlorotoluene
- 48 tert-butylbenzene
- 49 1,2,4-trimethylbenzene
- 50 sec-butylbenzene
- 51 p-isopropyltoluene
- 52 1,3-dichlorobenzene
- 53 1,4-dichlorobenzene
- 54 n-butylbenzene
- 55 1,2-dichlorobenzene
- 56 1,2-dibromo-3-chloropropane
- 57 1,2,4-trichlorobenzene
- 58 hexachlorobutadiene
- 59 naphthalene
- 60 1,2,3-trichlorobenzene



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